

Personal Consumption Expenditures in the 1958 Input-Output Study

THIS article extends the information on personal consumption expenditures that was made available in the 1958 input-output study.¹ It discusses the relationship between the industry classification scheme used in the input-output (or interindustry) tables and the categories used for personal consumption expenditures (PCE) in the national income and product accounts. It thus provides, on a more detailed basis than has been available up to now, information on the industrial composition of PCE and, among other things, on the relative importance of the costs of distribution (trade and transportation). For convenience, this article repeats the information presented in November 1964 on the direct and indirect effect that PCE had on each industry in 1958; a new feature is that these effects are shown separately for each of the three major types of PCE: durable goods, non-durable goods, and services. In addition, this article compares four sets of estimates of the industrial composition of total PCE in 1964. Finally, tables with a detailed comparison of the 1947 and 1958 industrial composition of PCE are presented.²

Definition of personal consumption expenditures

Personal consumption expenditures are the largest component of the Nation's output as measured by GNP; in 1964, they comprised 63 percent of

the total.³ PCE consists of the market value of goods and services purchased by individuals and nonprofit institutions rendering services to individuals and the value of certain imputed goods and services received by individuals as income in kind.⁴

The "commodity flow" method is the basis for the estimates of PCE in both the 1958 input-output flow table and the national income and product accounts. In this method, all goods destined for personal consumption are identified from the output records of farms, factories, etc., and the flow of output is followed through the distribution channels where the costs of transportation, of trade (measured as gross margins inclusive of retail sales and excise taxes), and of certain types of insurance are added to the producers' values to arrive at the prices paid by persons.

Although PCE in the aggregate is identical in GNP and in the input-output flow table for 1958, there are, on a detailed basis, important differences in classification between the two sets of accounts. In the GNP tables, consumption expenditures are classified by functional category; in the interindustry tables, they are classified by producing industry. For example, in GNP the classification "food expenditures" consists of the following functional categories: food purchased for off-premise consumption; purchased meals and beverages; food furnished govern-

ment (including military) and commercial employees; and food produced and consumed on farms. In the input-output flow table,⁵ on the other hand, "food expenditures" as such are not explicitly shown. However, the PCE column includes flows from the various industries that produce and distribute food: livestock and livestock products (1), other agricultural products (2), forestry and fishery products (3), food and kindred products (14), transportation (65), and trade (69).

The treatment of transportation and trade margins poses a special sort of classification problem since it requires that a distinction be made between producers' prices and purchasers' prices. In GNP, personal consumption expenditures (like all final purchases) are always shown in final purchasers' prices. "Food purchased for off-premise consumption," for example, typically reflects prices actually paid in retail food stores and thus includes all costs to the consumer, including the cost of transportation and of wholesale and retail distribution. In the interindustry flow table, on the other hand, values are shown at producers' prices. That is, goods and services are valued at the prices that producers charge. (These prices, by convention, include excise taxes levied on the producer.) It is these producers' values, in the case of items destined for personal consumption, that are allocated to the PCE column. The transportation costs and trade margins (operating expenses plus profits of wholesalers and retailers) necessary to bring the goods to consumers are shown separately in the PCE column as consumer purchases from the transportation and trade industries respectively. By convention, the costs of trade to the consumer include retail excise taxes and sales taxes. The entry in the trade row

NOTE.—Jean R. Fraser made a significant contribution in preparation of table 1.

1. The first report on the 1958 study, "The Interindustry Structure of the United States, A Report on the 1958 Input-Output Study," appeared in the November 1964 *SURVEY OF CURRENT BUSINESS*. The September 1965 *SURVEY* presented the basic flow table, in dollar values, underlying the tables first presented last November; the flow table (and the other tables shown with it) incorporated minor revisions of the tables issued earlier.

2. The research for this article was financed by the Interagency Growth Study.

3. The revised estimates of PCE incorporate some definitional changes, of which the most important is the elimination of the payment by persons of interest on personal debt. A description of these changes and the revised figures for PCE from 1929 to the current period, in total and by major type, appear in the August 1965 *SURVEY*. The full breakdown of PCE into 83 categories for this period will be published in a forthcoming supplement.

4. These imputed items are: (1) the space-rental value of owner-occupied houses (but not the purchase of new dwellings, which are considered capital goods); (2) the value of food, clothing, and housing furnished in kind to government (including military) and business employees; (3) food and fuel produced and consumed on farms; and (4) services rendered to individuals and nonprofit institutions by financial intermediaries (except insurance companies) without explicit charge.

5. Table 1, Interindustry Transactions, 1958, *SURVEY*, September 1965, page 34.

Table 1.—Industrial Composition of Personal Consumption Expenditures, by PCE Category,¹ in Producers' and Purchasers' Prices, 1958

(Millions of dollars)

Producing industry number ¹	Allocations to PCE					Producing industry number ¹	Allocations to PCE					Producing industry number ¹	Allocations to PCE										
	Pro- ducers' prices	Trans- porta- tion (indus- try 60)	Trade (indus- try 60)	Insur- ance (indus- try 70)	Pur- chasers' prices		Pro- ducers' prices	Trans- porta- tion (indus- try 60)	Trade (indus- try 60)	Insur- ance (indus- try 60)	Pur- chasers' prices		Pro- ducers' prices	Trans- porta- tion (indus- try 60)	Trade (indus- try 60)	Insur- ance (indus- try 70)	Pur- chasers' prices						
I-1. Food purchased for off-premise consumption (n.d.c.)																							
1.....	41,426	2,219	14,788	0	68,436	18.....	4,305	128	2,728	1	7,164	71.....	11,373	0	0	0	11,373						
2.....	1,485	63	504	0	2,044	19.....	4,085	(*)	2,845	0	6,715	72.....	11,048	0	0	0	11,048						
3.....	1,323	649	1,148	0	3,220	20.....	2	(*)	1	0	0	73.....	143	0	0	0	143						
4.....	207	19	265	0	491	21.....	3	(*)	1	0	0	74.....	82	0	0	0	82						
5.....	1	0	0	0	1	22.....	1	(*)	1	0	0	75.....	0	0	0	0	0						
6.....	37,232	1,457	11,767	0	50,457	23.....	103	4	132	0	236	76.....	0	0	0	0	0						
7.....	21	2	7	0	29	24.....	48	12	58	1	113	77.....	0	0	0	0	0						
8.....	120	0	0	0	120	25.....	4	0	14	0	17	IV-1. Rental value of farmhouses (a.)											
9.....	936	139	1,068	0	2,043	26.....	0	0	0	0	0	71.....	1,561	0	0	0	1,561						
I-2. Purchased Meals and beverages (n.d.c.)																							
1.....	7,613	328	7,187	0	15,321	II-4. Standard clothing issued to military personnel (n.d.c.)						IV-4. Other housing (a.)											
2.....	94	2	94	0	100	20.....	87	1	(*)	0	88	72.....	1,184	0	0	0	1,184						
3.....	136	34	209	0	381	21.....	52	(*)	(*)	0	33	V-1. Furniture, including mattresses and bedsprings (d.c.)											
4.....	28	5	76	0	134	22.....	19	(*)	(*)	0	19	22.....	2,441	84	1,618	3	4,346						
5.....	7,150	278	6,802	0	14,256	23.....	3	(*)	(*)	0	0	24.....	2,086	52	1,704	9	4,184						
6.....	577	0	0	0	577	24.....	0	0	0	0	0	25.....	12	(*)	13	0	25						
I-3. Food furnished government (including military) and commercial employees (n.d.c.)																							
1.....	881	47	315	0	1,244	II-5. Cleaning, drying, pressing, alteration, storage and repair of garments incl. furs (in shops) n.d.c. (a.)						26.....	19	0	0	0	19						
2.....	32	1	11	0	44	72.....	1,797	0	0	0	1,797	27.....	14	0	53	3	76						
3.....	32	12	24	0	69	II-6. Laundering in establishments (a.)						28.....	12	(*)	13	0	25						
4.....	1	0	0	0	10	72.....	977	0	0	0	977	29.....	15	0	35	0	51						
5.....	(*)	31	251	0	1,077	77.....	940	0	0	0	940	30.....	14	0	53	0	76						
6.....	795	(*)	22	0	1	II-7. Jewelry and watches (d.c.)						31.....	2,712	84	1,717	0	4,675						
7.....	18	(*)	0	0	44	24.....	824	28	895	3	1,850	32.....	10	10	0	0	30						
I-4. Food produced and consumed on farms (n.d.c.)																							
1.....	1,418	0	0	0	1,418	33.....	31	1	32	0	54	33.....	5	5	0	0	10						
2.....	430	0	0	0	430	34.....	148	5	112	0	263	34.....	70	(*)	27	0	13						
3.....	396	0	0	0	396	35.....	734	21	718	0	1,483	35.....	0	0	0	0	0						
4.....	682	0	0	0	682	36.....	18	1	21	2	43	36.....	200	0	157	0	356						
I-5. Tobacco products (n.d.c.)																							
16.....	4,254	90	1,637	0	5,982	II-8. Other clothing, accessories, and jewelry (a.)						37.....	2,224	70	1,426	0	3,720						
30.....	4,259	90	1,634	0	5,974	72.....	372	0	0	0	372	38.....	22	(*)	6	0	28						
II-1. Shoe and other footwear (n.d.c.)																							
22.....	2,337	62	1,978	0	4,876	III-1. Toilet articles and preparations (n.d.c.)						39.....	56	0	57	0	148						
34.....	2,065	62	1,494	0	3,571	19.....	1,338	52	1,164	0	2,550	40.....	4	4	0	0	8						
50.....	44	3	44	0	91	20.....	1,168	(*)	861	0	2,194	41.....	150	133	0	0	283						
II-2. Shoe cleaning and repair (a.)																							
72.....	219	0	0	0	219	21.....	2	(*)	2	0	6	42.....	86	114	0	0	215						
II-3a. Women's and children's clothing and accessories except footwear (n.d.c.)																							
16.....	7,912	217	4,227	(*)	13,356	22.....	84	3	72	0	159	43.....	100	96	0	0	204						
17.....	386	5	383	0	840	23.....	56	2	57	0	113	44.....	6	(*)	(*)	0	7						
18.....	14	(*)	18	0	30	24.....	86	2	87	0	168	45.....	224	22	102	0	342						
19.....	7,949	194	4,333	0	11,560	25.....	22	2	24	0	46	46.....	351	70	0	0	461						
20.....	41	1	46	0	78	26.....	72	2	74	0	144	47.....	45	8	0	0	322						
21.....	82	2	86	0	90	27.....	9	1	8	0	18	48.....	45	8	0	0	134						
22.....	9	(*)	4	0	17	28.....	133	4	137	0	280	49.....	15	15	0	0	30						
23.....	301	3	305	0	639	29.....	77	21	700	0	1,455	50.....	10	10	0	0	20						
24.....	66	2	64	0	101	30.....	56	2	43	0	160	51.....	19	19	0	0	40						
25.....	66	2	64	0	101	31.....	118	3	109	0	320	52.....	58	54	0	0	113						
26.....	129	5	137	(*)	260	32.....	22	1	16	0	40	53.....	22	1	16	0	40						
27.....	36	0	36	0	72	33.....	9	1	8	0	18	54.....	9	8	0	0	18						
28.....	36	0	36	0	72	34.....	133	4	137	0	280	55.....	18	16	0	0	36						
29.....	36	0	36	0	72	35.....	4	1	3	0	8	56.....	27	24	0	0	51						
II-3b. Men's and boys' clothing and accessories except footwear (n.d.c.)																							
18.....	4,305	128	2,728	1	7,164	III-2. Barbershops, beauty parlors, and baths (a.)						57.....	40	38	0	0	82						
19.....	4,085	(*)	2,845	0	6,715	72.....	2,094	0	0	0	2,094	58.....	113	113	0	0	226						
20.....	2	(*)	1	0	0	IV-1. Owner-occupied nonfarm dwellings—space rental value (a.)						59.....	19	19	0	0	38						
21.....	3	(*)	1	0	0	71.....	26,304	0	0	0	26,304	60.....	58	54	0	0	113						
22.....	1	(*)	1	0	0							61.....	22	1	16	0	40						
23.....	103	4	132	0	236							62.....	9	8	0	0	18						
24.....	48	12	58	1	113							63.....	18	16	0	0	36						
25.....	4	0	14	0	17							64.....	133	4	137	0	280						
																		65.....	4	3	0	0	8
																		66.....	7	6	0	0	13
																		67.....	2	(*)	5	0	0
																		68.....	168	110	0	0	283
																		69.....	44	42	7	7	97

(d.c.) durable commodities
(n.d.c.) nondurable commodities
(s.) services

*Less than 2500.000

¹ The numbering scheme of the personal consumption expenditure categories corresponds to the table "Personal Consumption Expenditures, by Type of Product" to be published in a forthcoming supplement to the SURVEY OF CURRENT BUSINESS. With the exceptions footnoted, the category numbers also correspond to the table 1 in the July 1964 SURVEY.

Expenditure categories VII-6 and XII-3 in the July 1964 table have been omitted because these items are no longer included in personal consumption expenditures.

¹ Industry number relates to the numbering scheme used for the 1988 input-output study. For name and Standard Industrial Classification (SIC) coverage of each industry, see the table at the end of this article.

¹ Changes in definition from old category V-8c, Water.

* Change in definition from old category VII-1, Brokerage charges and interest, and investment consulting.

Table 1.—Industrial Composition of Personal Consumption Expenditures, by PCE Category,¹ in Producers' and Purchasers' Prices, 1958—Continued

(Millions of dollars)

Producing industry number ¹	Allocations to PCE					Producing industry number ²	Allocations to PCE					Producing industry number ¹	Allocations to PCE								
	Producers' prices	Transportation (Industry 65)	Trade (Industry 66)	Insurance (Industry 70)	Purchasers' prices		Producers' prices	Transportation (Industry 65)	Trade (Industry 66)	Insurance (Industry 70)	Purchasers' prices		Producers' prices	Transportation (Industry 65)	Trade (Industry 66)	Insurance (Industry 70)	Purchasers' prices				
V-5. Semidurable house furnishings (n.d.c.)																					
16.....	1,341	35	1,151	4	2,531	66.....	3,593	0	0	0	3,593	VII-4. Expense of handling life insurance (s.)									
17.....	287	4	321	0	692	78.....	2,178	0	0	0	2,178	73.....	1,531	0	0	1,531					
18.....	15	(*)	15	0	31	88.....	22	0	0	0	22	VII-5. Legal services (s.)									
19.....	902	16	717	0	1,633	V-11. Other household operation (s.)										73.....	1,531	0	0	1,531	
20.....	5	(*)	3	0	8	65.....	1,763	0	0	0	1,763	VII-6. Funeral and burial expenses ³ (s.)									
21.....	10	(*)	2	0	14	70.....	286	0	0	0	286	0.....	1,308	6	13	0	1,327				
22.....	7	(*)	0	0	14	72.....	117	0	0	0	117	36.....	5	2	4	0	13				
23.....	8	(*)	1	0	10	73.....	733	0	0	0	733	71.....	242	0	0	0	242				
24.....	8	(*)	9	0	15	75.....	52	0	0	0	52	72.....	1,013	0	0	0	1,013				
25.....	15	(*)	5	0	21	76.....	370	0	0	0	370	VII-7. Other personal business (s.)									
26.....	58	3	63	0	142	VI-1. Drug preparations and sundries (n.d.c.)										66.....	931	0	0	0	931
27.....	7	(*)	1	0	18	24.....	1,582	68	1,435	0	3,185	73.....	17	0	0	0	17				
28.....	1	(*)	0	0	1	27.....	116	8	129	0	253	76.....	137	0	0	0	137				
29.....	2,088	188	904	0	3,080	32.....	(*)	(*)	(*)	0	1	78.....	6	0	0	0	6				
30.....	12	9	0	0	21	34.....	1,442	38	1,189	0	2,669	77.....	729	0	0	0	729				
31.....	570	40	246	0	865	35.....	47	1	42	0	90	82.....	63	0	0	0	63				
32.....	88	1	6	0	44	36.....	6	(*)	4	0	11	VIII-1a. New cars and net purchases of used cars ⁴ (d.c.)									
33.....	2	(*)	7	0	8	43.....	3	(*)	1	0	4	60.....	3,508	237	2,453	0	13,258				
34.....	104	8	38	0	145	44.....	77	2	70	0	140	61.....	5,119	231	1,552	0	11,302				
35.....	1,076	43	457	0	1,574	VI-2. Ophthalmic products and orthopedic appliances (d.c.)										82.....	336	6	176	0	575
36.....	18	1	19	0	36	37.....	193	6	464	0	663	83.....	53	0	1,328	0	1,379				
37.....	27	2	21	0	30	38.....	2	(*)	43	0	2	VIII-1b. Tires, tubes, accessories, and parts (d.c.)									
38.....	27	1	28	0	54	62.....	63	3	43	0	97	19.....	1,124	18	288	0	2,426				
39.....	5	(*)	2	0	7	63.....	129	5	420	0	564	27.....	42	1	31	0	75				
40.....	114	3	44	0	161	VI-3. Physicians (s.)										28.....	32	4	20	0	76
41.....	20	1	10	0	30	77.....	4,574	0	0	0	4,574	29.....	22	1	15	0	38				
42.....	34	1	29	0	74	VI-4. Dentists (s.)										30.....	801	24	547	0	1,372
43.....	1	(*)	0	0	1	77.....	1,376	0	0	0	1,376	42.....	12	(*)	8	0	20				
44.....	1	(*)	0	0	1	VI-5. Other professional services (s.)										62.....	16	1	15	0	33
45.....	1	(*)	0	0	1	77.....	832	0	0	0	832	65.....	15	(*)	15	0	30				
46.....	1	(*)	0	0	1	VI-6. Privately controlled hospitals and sanitariums (s.)										66.....	32	1	22	0	55
47.....	1	(*)	0	0	1	77.....	4,202	0	0	0	4,202	68.....	163	4	82	0	248				
48.....	1	(*)	0	0	1	VI-7. Health insurance (s.)										69.....	81	2	62	0	145
49.....	1	(*)	0	0	1	70.....	1,130	0	0	0	1,130	82.....	43	0	68	0	20				
50.....	1	(*)	0	0	1	77.....	1,128	0	0	0	1,128	VIII-1c. Automobile repair, greasing, washing, parking, storage, and rental (s.)									
51.....	1	(*)	0	0	1	VI-8. Other services (s.)										75.....	4,387	0	0	0	4,387
52.....	1	(*)	0	0	1	77.....	832	0	0	0	832	VIII-1d. Gasoline and oil (n.d.c.)									
53.....	1	(*)	0	0	1	VI-9. Privately controlled hospitals and sanitariums (s.)										32.....	5,251	275	6,324	0	10,951
54.....	1	(*)	0	0	1	77.....	4,202	0	0	0	4,202	VIII-1e. Bridge, tunnel, ferry, and road tolls (s.)									
55.....	1	(*)	0	0	1	VI-10. Health insurance (s.)										65.....	250	0	0	0	250
56.....	1	(*)	0	0	1	70.....	1,130	0	0	0	1,130	70.....	244	0	0	0	244				
57.....	1	(*)	0	0	1	77.....	1,128	0	0	0	1,128	VIII-2. Bank service charges, trust services, and safe-deposit box rental (s.)									
58.....	1	(*)	0	0	1	VI-11. Brokerage charges and investment counseling ⁵ (s.)										37.....	584	0	0	0	584
59.....	1	(*)	0	0	1	70.....	1,130	0	0	0	1,130	VIII-3. Service furnished w/o payment by financial intermediaries except insurance companies (s.)									
60.....	1	(*)	0	0	1	77.....	1,128	0	0	0	1,128	70.....	4,074	0	0	0	4,074				
61.....	1	(*)	0	0	1	VI-12. Bank service charges, trust services, and safe-deposit box rental (s.)										70.....	4,074	0	0	0	4,074
62.....	1	(*)	0	0	1	70.....	1,130	0	0	0	1,130	VIII-4. Bridge, tunnel, ferry, and road tolls (s.)									
63.....	1	(*)	0	0	1	77.....	1,128	0	0	0	1,128	65.....	250	0	0	0	250				
64.....	1	(*)	0	0	1	VI-13. Service furnished w/o payment by financial intermediaries except insurance companies (s.)										70.....	244	0	0	0	244
65.....	1	(*)	0	0	1	70.....	1,130	0	0	0	1,130	VIII-5. Bridge, tunnel, ferry, and road tolls (s.)									
66.....	1	(*)	0	0	1	77.....	1,128	0	0	0	1,128	65.....	250	0	0	0	250				
67.....	1	(*)	0	0	1	VI-14. Bank service charges, trust services, and safe-deposit box rental (s.)										70.....	244	0	0	0	244
68.....	1	(*)	0	0	1	70.....	1,130	0	0	0	1,130	VIII-6. Bridge, tunnel, ferry, and road tolls (s.)									
69.....	1	(*)	0	0	1	77.....	1,128	0	0	0	1,128	65.....	250	0	0	0	250				
70.....	1	(*)	0	0	1	VI-15. Bank service charges, trust services, and safe-deposit box rental (s.)										70.....	244	0	0	0	244
71.....	1	(*)	0	0	1	70.....	1,130	0	0	0	1,130	VIII-7. Bridge, tunnel, ferry, and road tolls (s.)									
72.....	1	(*)	0	0	1	77.....	1,128	0	0	0	1,128	65.....	250	0	0	0	250				
73.....	1	(*)	0	0	1	VI-16. Bank service charges, trust services, and safe-deposit box rental (s.)										70.....	244	0	0	0	244
74.....	1	(*)	0	0	1	70.....	1,130	0	0	0	1,130	VIII-8. Bridge, tunnel, ferry, and road tolls (s.)									
75.....	1	(*)	0	0	1	77.....	1,128	0	0	0	1,128	65.....	250	0	0	0	250				
76.....	1	(*)	0	0	1	VI-17. Bank service charges, trust services, and safe-deposit box rental (s.)										70.....	244	0	0	0	244
77.....	1	(*)	0	0	1	70.....	1,130	0	0	0	1,130	VIII-9. Bridge, tunnel, ferry, and road tolls (s.)									
78.....	1	(*)	0	0	1	77.....	1,128	0	0	0	1,128	65.....	250	0	0	0	250				
79.....	1	(*)	0	0	1	VI-18. Bank service charges, trust services, and safe-deposit box rental (s.)										70.....	244	0	0	0	244
80.....	1	(*)	0	0	1	70.....	1,130	0	0	0	1,130	VIII-10. Bridge, tunnel, ferry, and road tolls (s.)									
81.....	1	(*)	0	0	1	77.....	1,128	0	0	0	1,128	65.....	250	0	0	0	250				
82.....	1	(*)	0	0	1	VI-19. Bank service charges, trust services, and safe-deposit box rental (s.)										70.....	244	0	0	0	244
83.....	1	(*)	0	0	1	70.....	1,130	0	0	0	1,130	VIII-11. Bridge, tunnel, ferry, and road tolls (s.)									
84.....	1	(*)	0	0	1	77.....	1,128	0	0	0	1,128	65.....	250	0	0	0	250				
85.....	1	(*)	0	0	1	VI-20. Bank service charges, trust services, and safe-deposit box rental (s.)										70.....	244	0	0	0	244
86.....	1	(*)	0	0	1	70.....	1,130	0	0	0	1,130	VIII-12. Bridge, tunnel, ferry, and road tolls (s.)									
87.....	1	(*)	0	0	1	77.....	1,128	0	0	0	1,128	65.....	250	0	0	0	250				
88.....	1	(*)	0	0	1	VI-21. Bank service charges, trust services, and safe-deposit box rental (s.)										70.....	244	0	0	0	244
89.....	1	(*)	0	0	1	70.....	1,130	0	0	0	1,130	VIII-13. Bridge, tunnel, ferry, and road tolls (s.)									
90.....	1	(*)	0	0	1	77.....	1,128	0	0	0	1,128	65.....	250	0	0	0	250				
91.....	1	(*)	0	0	1	VI-22. Bank service charges, trust services, and safe-deposit box rental (s.)										70.....	244	0	0	0	244
92.....	1	(*)	0	0	1	70.....	1,130	0	0	0	1,130	VIII-14. Bridge, tunnel, ferry, and road tolls (s.)									
93.....	1	(*)	0	0	1	77.....	1,128	0	0	0	1,128	65.....	250	0	0	0	250				
94.....	1	(*)	0	0	1	VI-23. Bank service charges, trust services, and safe-deposit box rental (s.)										70.....	244	0	0	0	244
95.....	1	(*)	0	0	1	70.....	1,130	0	0	0	1,130	VIII-15. Bridge, tunnel, ferry, and road tolls (s.)									
96.....	1	(*)	0	0	1	77.....	1,128	0	0	0	1,128	65.....	250	0	0	0	250				
97.....	1	(*)	0	0	1	VI-24. Bank service charges, trust services, and safe-deposit box rental (s.)										70.....	244	0	0	0	244
98.....	1	(*)	0	0	1	70.....	1,130	0	0	0	1,130	VIII-16. Bridge, tunnel, ferry, and road tolls (s.)									
99.....	1	(*)	0	0	1	77.....	1,128	0	0	0	1,128	65.....	250	0	0	0	250				
100.....	1	(*)	0	0	1	VI-25. Bank service charges, trust services, and safe-deposit box rental (s.)										70.....	244	0	0	0	244

¹ Funeral and burial expenses, formerly numbered VI-8.² Imported cars do not appear as a purchase from the import industry (number 80) but are included in the motor vehicles industry (number 69). The import data on autos and parts used for the 1958 input-output study did not distinguish between assembled and un-assembled cars. The total value of such imports was transferred to industry 29 for distribution.³ Expenditures in the United States by foreigners, formerly numbered XII-4.⁴ Does not correspond to old category XII-4.

NOTES.—Details may not add to total due to rounding.

Source: U.S. Department of Commerce, Office of Business Economics.

under the PCE column in the flow table includes the cost of distributing all items of PCE through trade channels. The section that follows provides some detailed examples of the foregoing discussion.

Industrial Composition of PCE, 1958

TABLE 1 makes clear the relationship between the interindustry flow table and the GNP accounts in the treatment of personal consumption expenditures. It shows consumption expenditures for each of the 83 functional categories (PCE category) in the GNP accounts. Within each category, it shows the industrial breakdown of expenditures by input-output industry in producers' prices, plus each element of margin—transportation, trade, and insurance—which is added on to arrive at purchasers' prices.⁶ The industry titles and their definitions in terms of the Standard Industrial Classification (SIC) are shown in the table at the end of this article.⁷

6. These same data, in slightly different form, were shown in table C of the November 1964 SURVEY article for PCE classified into 12 broad categories.

7. For a discussion of the way in which output of the various industries is defined in the 1958 study, see pages 16 and 17 of the November 1964 SURVEY. Only a few points considered necessary to an understanding of the figures in table 1 of this article are summarized here.

Purchases represent primary products of an industry: The purchase by consumers from any given domestic industry measures the purchase of that industry's primary product, whether produced in the primary industry or, as a secondary product, in another industry. This is because all secondary products of an industry are transferred (treated as if sold) to the industry to which they are primary; they augment the output of the industry to which they are transferred.

Scrap, used, or secondhand goods (industry 85): Consumer purchases from this industry as shown in the first column of table 1 represent purchases by the personal sector from other final demand sectors less personal sales to other final demand sectors. (Sales within the personal sector do not affect the first column because they cancel.) However, the trade margin has been measured on all sales of used goods—both within the personal sector and between persons and other sectors—to the extent that such sales pass through trade channels. This margin is usually the largest part of the value of used goods in purchasers' prices. Thus, for used cars (part of category VIII-1a), purchases in 1958 from industry 85 amounted to \$1,379 million, of which \$1,324 million was margin. The value of \$55 million in producers' prices represented the small net acquisition by persons of used cars from other final demand sectors.

Gross imports (industry 80): Nearly every one of the PCE categories shows some purchases from the import industry. Under the convention adopted in the 1958 study, imports purchased by the final demand sectors have been shown as a direct purchase from the import row. (On the other hand, imports used for further processing, if they were like domestic goods, have been transferred to the domestic industry producing similar goods and distributed along with the domestic production of those goods. Imports used for further processing which had no domestic counterpart have been shown in the flow table as direct purchases by the processing industry from the import row.)

In "food purchased for off-premise consumption" (category I-1), \$41,426 million represents the value of food at prices charged by producers. The industrial composition of this value can be seen by reading down the first column: \$1,486 million of livestock and livestock products (industry 1), \$1,522 million of other agricultural products (industry 2), etc. The total transportation margin of \$2,219 million for the entire category shown in the second column represents the sum of the individual transportation costs applicable to each producing industry. For example, \$53 million was the cost of transporting livestock and livestock products (industry 1) to consumers; \$549 million was the transportation cost involved in bringing the products of industry 2 to consumers, and so on. The costs of wholesale and retail distribution applicable to each producing industry are shown in the third column. For example, of the total margin of \$14,760 million of wholesalers and retailers in category I-1, \$504 million was required for the distribution of products of industry 1. Purchases of insurance from industry 70 (finance and insurance) are shown in the next to last column only to the extent that they apply to imported goods.

The total transportation margin of \$2,219 million and the trade margin of \$14,760 million are added to the producers' value of "food for off-premise consumption" to arrive at the purchasers' value of \$58,406 million. This last figure appears as item I-1 in the PCE table scheduled for publication in the near future. The industrial composition of this total in purchasers' prices, i.e., retail value, is shown in the last column. In table 1, the transportation margin and trade margin for the products of any given industry are shown along the row for that industry. In this way, table 1 provides measures of the transportation and trade costs involved in bringing goods to consumers, separately for each producing industry and for each PCE category.

It should be noted that the retail component of the trade industry has been defined to include certain activities beyond those of the conventional retail store. For example, in "purchased

meals and beverages" (category I-2), the \$7,187 million trade margin includes not only the wholesale markup on food sold by food producers to restaurants but also the entire restaurant markup over the delivered cost of food. (The \$7,813 million in producers' prices represents sales of food from the producing industries before the addition of distribution costs.) Also, the value of the professional services of optometrists are classified as a retail trade activity for the purposes of the input-output table. Payment for their services is part of the trade margin in "ophthalmic products and orthopedic appliances" (category VI-2).

An industry may appear in more than one PCE category in table 1. Listings for industry 14 (food and kindred products), for example, appear under 4 of the 83 PCE categories. To obtain the total allocation of any particular industry to PCE it is necessary to sum the several entries for the industry in table 1.

The summation of all entries for the transportation, trade, and insurance

Table 2.—Categories of Personal Consumption Expenditures for Commodities: Arranged by Ratio of Producers' Value to Purchasers' Value, 1958

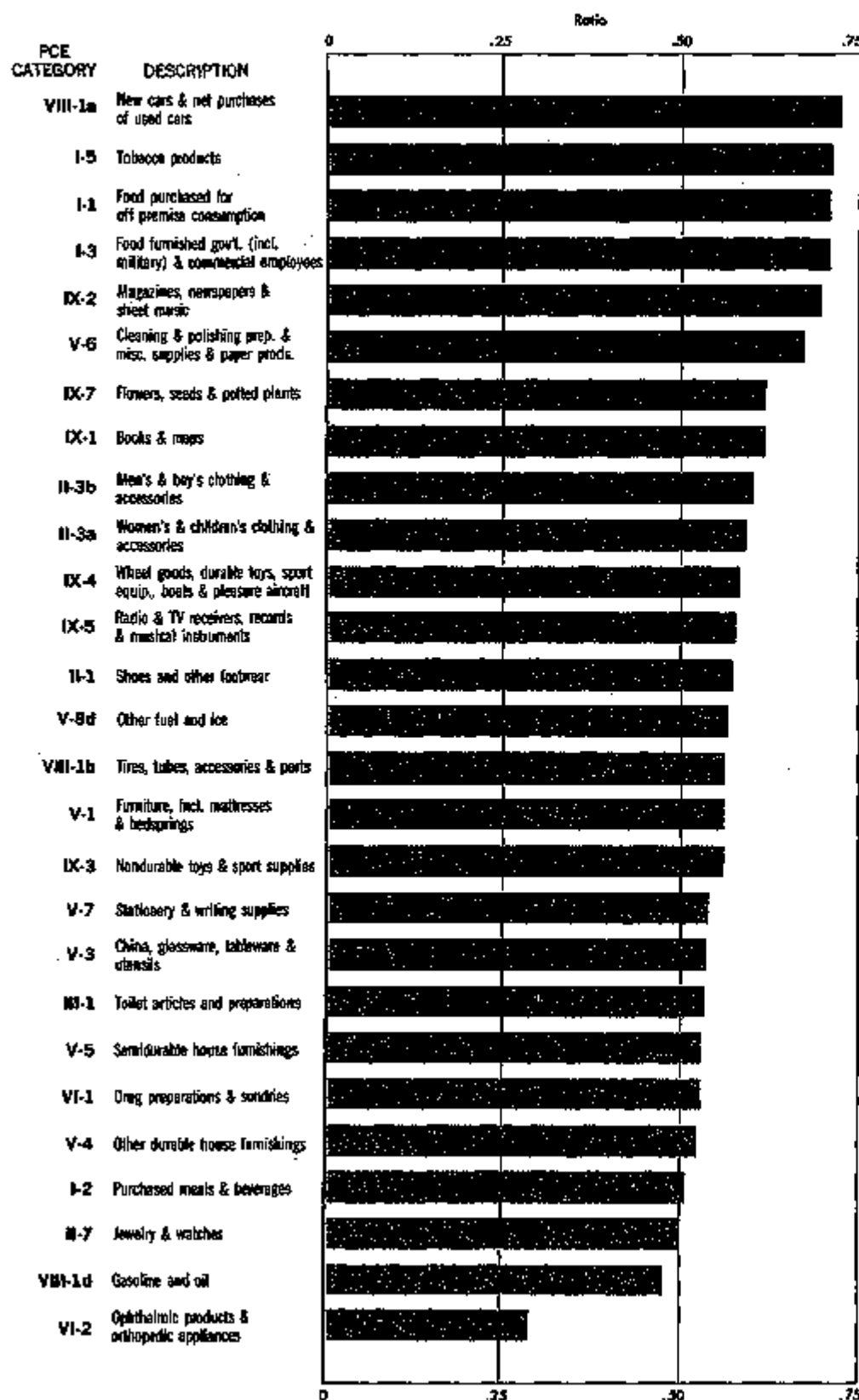
PCE Category		
Number	Description	Ratio
VIII-1a	New cars & net purchases of used cars	0.722
I-5	Tobacco products	.731
I-1	Food purchased for off-premise consumption	.769
I-2	Food furnished government (incl. military) & commercial employees	.769
IX-2	Magazines, newspapers, & sheet music	.695
V-6	Cleaning & polishing prep. & misc. supplies & paper products	.673
IX-7	Flowers, seeds & potted plants	.620
IX-1	Books & maps	.619
IX-3a	Men's & boys' clothing & accessories	.601
IX-3b	Women's & children's clothing & accessories	.603
IX-4	Wheel goods, durable toys, sport equip., boats & pleasure aircraft	.605
IX-5	Radio & television receivers, records & musical instruments	.590
II-1	Shoes & other footwear	.574
V-8d	Other fuel & ice	.568
VIII-1b	Tires, tubes, accessories & parts	.563
V-1	Furniture, incl. mattresses & bed-springs	.562
IX-3	Non-durable toys & sport supplies	.561
V-7	Stationery & writing supplies	.540
V-8	China, glassware, tableware & utensils	.530
III-1	Toilet articles & preparations	.523
V-6	Semi-durable house furnishings	.522
VI-1	Drug preparations & sundries	.520
V-4	Other durable house furnishings	.525
I-3	Purchased meals & beverages	.510
II-7	Jewelry and watches	.450
VIII-1d	Gasoline & oil	.450
VI-2	Ophthalmic products & orthopedic appliances	.291

¹ Excluded are certain categories of imputed expenditures which have no margin.

Source: U.S. Department of Commerce, Office of Business Economics.

CHART 5

Categories of Personal Consumption Expenditures for Commodities¹ Arranged by Ratio of Producers' Value to Purchasers' Value, 1938



¹ Excluded are certain categories of imported expenditures which have no margin.

industries requires the addition of both "margin" and "nonmargin" purchases. Nonmargin purchases refer to those services that consumers buy directly from airlines, railroads, bus companies, etc. (industry 65); these are shown, for example, in the producers' prices column of table 1 under category VIII-2a and VIII-3c. To these must be added the "margin" purchases from the transportation industry to get total purchases by persons from the transportation industry.

The only nonmargin purchase from the trade industry (number 69) is tips, which appear in the producers' prices column of table 1 under "purchased meals and beverages." Margin purchases from this industry far exceed the nonmargin purchases.

Consumer purchases from industry 70 (finance and insurance) include health insurance (see category VI-7) and bank service charges (see category VII-2). The margin purchases from this industry shown in table 1 cover only the cost of insuring imported commodities while in transit. (Insurance on domestic products is included in the transportation margin.)

Producer-purchaser prices

Table 1 provides useful information on the size and distribution of transportation and trade margins as defined in the input-output system. Of total PCE in purchasers' prices, transportation margins account for almost 2 percent and trade margins 21 percent; the residual of 77 percent is, of course, producers' value. The share of the consumers' dollar which goes to the producer is 61 percent for durable goods and 63 percent for nondurable goods.

Table 2 and chart 5 show the ratio of producers' value to purchasers' value for each PCE category, with categories arranged in descending order according to that ratio. The median is 57 percent (producers' value as a percent of purchasers' value). "New cars and net purchases of used cars," with 72 percent of the total value going to producers, shows the largest ratio (or the smallest relative distribution costs as defined here). "Food for off-premise consumption" also shows a high ratio, with 71 percent of the consumer's

dollar going to the food producer. It should be borne in mind that the inclusion of restaurant markup, the services of optometrists, and retail excise taxes and sales taxes in the retail trade industry affects the spread shown for the various PCE categories.

Industrial composition: three major types of expenditure

The values in table 1 in producers' prices have been reorganized to show the industrial composition for each of the three major types of personal consumption expenditures: durable goods, nondurable goods, and services. Table 3 shows this summary in percentage terms. Column 1, which applies to the total, corresponds to the PCE column in table A of the November 1964 article, except that the latter was based on preliminary figures.

From table 3, it is apparent that the largest share of expenditures on both durable goods and nondurable goods was for trade (industry 69). Aside from trade, the largest share (24 percent) of durable goods expenditures was accounted for by the motor vehicles and equipment industry (number 59), and the largest share (33 percent) of nondurable expenditures was for food and kindred products (industry 14). The largest part (36 percent) of service expenditures was for real estate and rent (industry 71). A significant proportion of real estate and rent expenditures represented the value of imputed rent for owner-occupied housing.

Industrial Impact of PCE

PERSONAL consumption expenditures make a direct demand on numerous industries—automobiles, apparel, food, furniture, to mention a few. While measures of this direct reliance of the producing industry on consumer demand are important, it is a unique contribution of the input-output system that it permits the computation of the indirect effects of PCE on each industry. For example, furniture bought by persons is a direct demand on the furniture industry. The lumber and upholstery fabrics used in the manufacture of the furniture are indirect demands of consumer expenditures on the lumber and textile industries. These two industries

Table 3.—Industrial Composition of Personal Consumption Expenditures, Total and by Major Type, in Producers' Prices, 1958
(Percent)

Producing industry	(1) Total	(2) Durable goods	(3) Nondurable goods	(4) Services
Total.....	100.00	100.00	100.00	100.00
1. Livestock & livestock products.....	.73	0	1.45	0.95
2. Other agricultural products.....	.85	0	1.73	0
3. Forestry & fishery products.....	.10	0	.20	0
4. Agricultural, forestry & fishery services.....	0	0	0	0
5. Iron & ferroalloy ores mining.....	0	0	0	0
6. Nonferrous metal ores mining.....	0	0	0	0
7. Coal mining.....	.09	0	.19	0
8. Crude petroleum & natural gas.....	0	0	0	0
9. Stone & clay mining & quarrying.....	.01	0	.01	(*)
10. Chemical & fertilizer mineral mining.....	(*)	0	(*)	0
11. New construction.....	0	0	0	0
12. Maintenance & repair construction.....	0	0	0	0
13. Ordnance & accessories.....	.04	.10	.07	0
14. Food & kindred products.....	15.78	0	32.65	0
15. Tobacco manufactures.....	1.47	0	3.83	0
16. Broad & narrow fabrics, yarn & thread mills.....	.25	.27	.43	0
17. Miscellaneous textile goods & floor coverings.....	.26	1.86	.03	0
18. Apparel.....	3.68	0	7.97	0
19. Miscellaneous fabricated textile products.....	.85	.40	.09	0
20. Lumber & wood products, except containers.....	.05	.27	.03	0
21. Wood containers.....	0	0	0	0
22. Household furniture.....	.85	5.39	0	0
23. Other furniture & fixtures.....	.04	.24	0	0
24. Paper & allied products, except containers.....	.29	0	.81	0
25. Paperboard containers & boxes.....	.01	0	.03	0
26. Printing & publishing.....	.84	1.67	1.25	(*)
27. Chemicals & selected chemical products.....	.09	.14	.11	0
28. Plastics & synthetic materials.....	(*)	0	.01	0
29. Drugs, cleaning & toilet preparations.....	1.28	.06	2.53	0
30. Paints & allied products.....	.02	0	.01	0
31. Petroleum refining & related industries.....	2.50	0	5.13	0
32. Rubber & miscellaneous plastics products.....	.45	2.80	.29	0
33. Leather tanning & industrial leather products.....	0	0	0	0
34. Footwear & other leather products.....	.90	.18	1.82	0
35. Glass & glass products.....	.04	.32	.01	0
36. Stone & clay products.....	.07	.37	.02	0.94
37. Primary iron & steel manufacturing.....	.01	0	.01	0
38. Primary nonferrous metals manufacturing.....	(*)	.03	0	0
39. Metal containers.....	0	0	0	0
40. Heating, plumbing & structural metal products.....	.02	.18	0	0
41. Stampings, screw machine products & bolts.....	.09	.62	.01	0
42. Other fabricated metal products.....	.13	.95	.09	0
43. Engines & turbines.....	.04	.33	0	0
44. Farm machinery & equipment.....	(*)	.02	0	0
45. Construction, mining & oil field machinery.....	0	0	0	0
46. Materials handling machinery & equipment.....	0	0	0	0
47. Metal working machinery & equipment.....	.01	.06	0	0
48. Spooling machinery & equipment.....	.01	.06	0	0
49. General industrial machinery & equipment.....	0	0	0	0
50. Machine shop products.....	0	0	0	0
51. Office, computing & accounting machines.....	.02	.15	0	0
52. Service industry machines.....	.09	.85	0	0
53. Electric industrial equipment & apparatus.....	.01	.02	(*)	0
54. Household appliances.....	.83	5.21	.64	0
55. Electric lighting & wiring equipment.....	.11	.29	.32	0
56. Radio, television & communication equipment.....	.47	3.60	0	0
57. Electronic components & accessories.....	.05	.39	0	0
58. Miscellaneous electrical machinery, equipment & supplies.....	.09	.54	.04	0
59. Motor vehicles & equipment.....	9.17	24.30	0	0
60. Aircraft & parts.....	.01	.07	0	0
61. Other transportation equipment.....	.23	1.92	0	0
62. Scientific & controlling instruments.....	.12	.72	.06	0
63. Optical, ophthalmic & photographic equipment.....	.16	.84	.11	0
64. Miscellaneous manufacturing.....	.57	2.90	.76	0
65. Transportation & warehousing.....	2.99	1.80	3.09	3.32
66. Communications: excluding radio & TV broadcasting.....	1.25	0	0	3.49
67. Radio & TV broadcasting.....	0	0	0	0
68. Electric, gas, water & sanitary services.....	2.78	0	.01	7.15
69. Wholesale & retail trade.....	21.21	25.76	23.97	.02
70. Finance & insurance.....	4.07	.94	(*)	10.33
71. Real estate & rental.....	19.78	0	0	35.67
72. Hotels, personal & repair services, except auto.....	3.26	.03	0	8.43
73. Business services.....	.65	0	0	1.09
74. Research & development.....	0	0	0	0
75. Automobile repair & services.....	1.61	0	0	3.82
76. Amusements.....	1.13	0	0	2.91
77. Medical, educational services, & nonprofit organizations.....	7.03	0	0	15.25
78. Federal Government enterprises.....	.22	0	0	.56
79. State & local government enterprises.....	.11	0	0	.28
80. Gross imports of goods & services.....	1.33	.56	1.44	1.45
81. Business travel, entertainment, & gifts.....	0	0	0	0
82. Office supplies.....	0	0	0	0
83. Scrap, used & secondhand goods.....	(*)	.13	-.04	0
84. Rest of the world industry.....	-.40	0	-.06	-.92
85. Household industry.....	1.21	0	0	3.12

*Less than 0.05 percent.

Source: U.S. Department of Commerce, Office of Business Economics.

Table 4.—Total, Direct, and Indirect Output Attributable to Total Personal Consumption Expenditures and to Each Major Type, 1958

[Percent]

Producing industry	Total			Durable goods			Nondurable goods			Services		
	Total	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect
1. Livestock & livestock products	90.0	8.0	82.0	1.0	0	1.0	89.0	7.8	81.2	8.4	0	8.4
2. Other agricultural products	75.2	10.4	64.8	1.7	0	1.7	73.5	10.4	63.1	8.0	0	8.0
3. Forestry & fishery products	24.1	10.4	13.7	0.3	0	0.3	23.8	10.4	13.4	4.1	0	4.1
4. Agricultural, forestry & fishery services	80.5	0	80.5	2.1	0	2.1	78.4	0	78.4	7.2	0	7.2
5. Iron & ferroalloy ores mining	22.2	0	22.2	15.8	0	15.8	6.4	0	6.4	0	0	0
6. Nonferrous metal ores mining	26.0	0	26.0	11.0	0	11.0	15.0	0	15.0	0	0	0
7. Coal mining	63.9	9.1	54.8	7.4	0	7.4	56.5	9.1	47.4	20.1	0	20.1
8. Crude petroleum & natural gas	71.1	0	71.1	3.4	0	3.4	67.7	0	67.7	15.0	0	15.0
9. Stone & clay mining & quarrying	24.2	1.1	23.1	3.0	0	3.0	21.2	1.1	20.1	7.8	0	7.8
10. Chemical & allied mineral mining	46.3	0	46.3	7.1	0	7.1	39.2	0	39.2	7.9	0	7.9
11. New construction	0	0	0	0	0	0	0	0	0	0	0	0
12. Maintenance & repair construction	60.7	0	60.7	2.7	0	2.7	58.0	0	58.0	40.1	0	40.1
13. Oil and gas services	7.0	0.4	6.6	2.1	1.3	0.8	4.9	0.4	4.5	0	0	0
14. Food & kindred products	94.1	70.2	23.9	0	0	0	94.1	70.2	23.9	1.9	0	1.9
15. Tobacco manufactures	90.4	71.5	18.9	0	0	0	89.4	71.5	17.9	0	0	0
16. Broad & narrow fabrics, yarn & thread mills	89.8	6.5	83.3	10.0	0	10.0	79.8	6.5	73.3	8.1	0	8.1
17. Miscellaneous textile goods & floor coverings	80.8	22.7	58.1	43.6	38.2	5.4	37.2	1.5	35.7	8.0	0	8.0
18. Apparel	97.5	78.1	19.4	0	0	0	97.5	78.1	19.4	1.4	0	1.4
19. Miscellaneous fabricated textile products	88.7	48.1	40.6	13.0	8.7	4.3	75.7	41.4	34.3	10.4	0	10.4
20. Lumber & wood products, except containers	27.7	1.8	25.9	10.6	1.3	9.3	17.1	0	17.1	8.7	0	8.7
21. Wooden containers	73.0	0	73.0	10.6	0	10.6	62.4	0	62.4	0	0	0
22. Household furniture	78.0	0	78.0	74.2	2.1	72.1	3.8	0	3.8	1.2	0	1.2
23. Other furniture & fixtures	14.2	0	14.2	11.3	0	11.3	2.9	0	2.9	0	0	0
24. Paper & allied products, except containers	88.2	8.1	80.1	0.7	0	0.7	87.5	8.1	79.4	12.9	0	12.9
25. Paperboard containers & boxes	74.0	1.0	73.0	11.9	0	11.9	62.1	1.0	61.1	8.0	0	8.0
26. Printing & publishing	73.0	19.8	53.2	11.6	8.0	3.6	61.4	19.8	41.6	21.5	0	21.5
27. Chemicals & selected chemical products	53.3	1.3	52.0	17.6	0	17.6	35.7	1.3	34.4	0	0	0
28. Plastics & synthetic materials	53.3	0	53.3	17.6	0	17.6	35.7	0	35.7	7.9	0	7.9
29. Drugs, chemicals & toilet preparations	32.6	55.0	22.6	2.0	0	2.0	30.6	55.0	25.6	12.0	0	12.0
30. Paints & allied products	52.1	0	52.1	11.4	0	11.4	40.7	0	40.7	23.6	0	23.6
31. Petroleum refining & related industries	70.9	49.3	21.6	0	0	0	70.9	49.3	21.6	0	0	0
32. Rubber & miscellaneous plastics products	63.0	19.0	44.0	24.4	14.2	10.2	38.6	4.7	33.9	10.3	0	10.3
33. Leather tanning & industrial leather products	88.8	0	88.8	2.7	0	2.7	86.1	0	86.1	1.9	0	1.9
34. Footwear & other leather products	91.7	68.8	22.9	2.4	0	2.4	89.3	68.8	20.5	1.2	0	1.2
35. Glass & glass products	85.2	5.9	79.3	10.6	3.0	7.6	74.6	5.9	68.7	0	0	0
36. Stone & clay products	20.0	2.8	17.2	6.2	1.3	4.9	13.8	2.8	11.0	0	0	0
37. Primary iron & steel manufacturing	31.4	0	31.4	16.2	0	16.2	15.2	0	15.2	4.8	0	4.8
38. Primary nonferrous metals manufacturing	28.2	0	28.2	13.2	0	13.2	15.0	0	15.0	0	0	0
39. Metal containers	84.4	0	84.4	2.2	0	2.2	82.2	0	82.2	4.3	0	4.3
40. Heating, plumbing & structural metal products	11.9	0	11.9	3.8	0	3.8	8.1	0	8.1	0	0	0
41. Scrapings, screw machine products & tools	47.0	8.7	38.3	28.8	6.3	22.5	18.2	8.7	9.5	5.2	0	5.2
42. Other fabricated metal products	42.7	5.8	36.9	20.6	3.8	16.8	22.1	5.8	16.3	7.4	0	7.4
43. Engines & turbines	21.1	5.7	15.4	12.1	0.7	11.4	9.0	5.7	3.3	0	0	0
44. Farm machinery & equipment	18.3	0	18.3	2.5	0	2.5	15.8	0	15.8	2.0	0	2.0
45. Construction, mining & oil field machinery	5.3	0	5.3	2.1	0	2.1	3.2	0	3.2	0	0	0
46. Materials handling machinery & equipment	4.8	0	4.8	2.1	0	2.1	2.7	0	2.7	1.8	0	1.8
47. Metalworking machinery & equipment	18.0	0	18.0	10.8	0	10.8	7.2	0	7.2	0	0	0
48. Special industry machinery equipment	13.0	0	13.0	3.6	0	3.6	9.4	0	9.4	2.2	0	2.2
49. General industrial machinery & equipment	14.4	0	14.4	6.5	0	6.5	7.9	0	7.9	2.6	0	2.6
50. Machine shop products	20.0	0	20.0	12.6	0	12.6	7.4	0	7.4	0	0	0
51. Office computing & accounting machines	32.6	2.6	30.0	4.2	2.6	1.6	28.4	2.6	25.8	7.3	0	7.3
52. Service industry machinery	34.9	11.0	23.9	17.2	11.0	6.2	17.7	11.0	6.7	4.2	0	4.2
53. Electric industrial equipment & apparatus	16.1	0	16.1	8.1	0	8.1	8.0	0	8.0	8.0	0	8.0
54. Household appliances	75.8	87.2	8.6	67.9	65.4	2.5	8.9	1.7	7.2	0	0	0
55. Electric heating & wiring equipment	33.7	13.6	20.1	14.8	0	14.8	18.9	13.6	5.3	0	0	0
56. Radio, television & communication equipment	32.3	23.6	8.7	24.9	22.4	2.5	7.4	2.4	5.0	0	0	0
57. Electronic components & accessories	58.7	6.6	52.1	30.6	5.6	25.0	28.1	6.6	21.5	11.3	0	11.3
58. Miscellaneous machinery, equipment & supplies	53.3	18.7	34.6	30.6	13.2	17.4	22.7	18.7	4.0	0	0	0
59. Motor vehicles & equipment	64.7	39.2	25.5	36.0	28.2	7.8	28.7	39.2	9.5	0	0	0
60. Aircraft & parts	8.9	0	8.9	1.4	0	1.4	7.5	0	7.5	0	0	0
61. Other transportation equipment	30.8	19.2	11.6	22.5	19.2	3.3	8.3	19.2	4.6	0	0	0
62. Scientific & controlling instruments	41.1	9.7	31.4	14.1	7.5	6.6	27.0	9.7	17.3	11.0	0	11.0
63. Optical, ophthalmic & photographic equipment	59.0	28.0	31.0	24.2	18.7	5.5	34.8	28.0	6.8	0	0	0
64. Miscellaneous manufacturing	75.1	45.7	29.4	31.4	28.6	2.8	43.7	45.7	18.0	10.7	0	10.7
65. Transportation & warehousing	61.9	35.4	26.5	7.3	2.0	5.3	54.6	35.4	19.2	10.9	0	10.9
66. Communications, excluding radio & TV broadcasting	78.6	42.1	36.5	4.8	0	4.8	73.8	42.1	31.7	13.0	0	13.0
67. Radio & TV broadcasting	45.8	0	45.8	8.5	0	8.5	37.3	0	37.3	25.1	0	25.1
68. Electric, gas, water, & sanitary services	79.4	26.7	52.7	5.0	0	5.0	74.4	26.7	47.7	20.7	0	20.7
69. Wholesale & retail trade	80.5	64.4	16.0	17.1	16.0	1.1	63.4	64.4	4.0	0	0	0
70. Finance & insurance	58.7	44.8	13.9	0	0	0	58.7	44.8	13.9	0	0	0
71. Real estate & rental	59.4	64.6	24.9	2.6	0	2.6	56.8	64.6	12.2	0	0	0
72. Hotels, personal & repair services, excluding auto	62.1	77.0	14.4	1.9	0	1.9	60.2	77.0	17.6	7.1	0	7.1
73. Business services	60.0	7.7	52.3	8.6	0	8.6	51.4	7.7	43.7	17.0	0	17.0
74. Research & development	1.8	0	1.8	0	0	0	1.8	0	1.8	0	0	0
75. Automobile repair & service	84.0	85.4	28.6	2.4	0	2.4	81.6	85.4	4.2	0	0	0
76. Amusements	89.2	32.0	57.2	1.5	0	1.5	87.7	32.0	55.7	24.3	0	24.3
77. Medical, educational services, & nonprofit organizations	44.3	30.9	13.4	0	0	0	44.3	30.9	13.4	0	0	0
78. Federal Government enterprises	75.9	15.4	60.4	8.4	0	8.4	67.5	15.4	52.1	22.7	0	22.7
79. State & local government enterprises	78.4	6.5	71.9	5.7	0	5.7	72.7	6.5	66.2	42.8	0	42.8
80. Gross imports of goods and services	62.5	18.8	43.7	8.0	1.0	7.0	54.5	18.8	35.7	0	0	0
81. Business travel, entertainment, & gifts	65.4	0	65.4	11.1	0	11.1	54.3	0	54.3	21.3	0	21.3
82. Other supplies	61.3	0	61.3	7.8	0	7.8	53.5	0	53.5	27.3	0	27.3

NOTE.—Details may not add to total due to rounding.

Source: U.S. Department of Commerce, Office of Business Economics.

in turn require the products of other industries; for example, the lumber industry requires chemicals and plastics, the textile industry requires cotton and wool, and so on. The cumulative effect on each industry of all the indirect flows generated by personal consumption expenditures is called the indirect demand attributable to PCE. Direct and indirect effects on each industry of total PCE (and each other major component of final demand) have already been published in table B of the November 1964 article.

The first three columns of table 4 repeat the information previously published by showing the percent of each industry's output attributable to PCE, directly, indirectly, and in total. The remaining columns are new and show similar information for durable goods, nondurable goods, and services.

PCE constituted 85 percent of GNP in 1958. Its importance is also reflected in the total effects on the various industries. Of the 82 industries, 50 attributed more than half of their output to PCE, directly and indirectly, and 19 attributed more than 80 percent to PCE.

As one might expect, most of the output of industries that produced mainly finished goods was attributed to the direct demand of PCE. For example, 90 percent of the total output of tobacco manufactures (industry 15) was attributed to PCE; 72 percent of the total was purchased directly by persons. On the other hand, the indirect demands were large for industries producing mainly intermediate goods. For example, less than 2 percent of the output of chemicals (industry 27) was sold directly to persons in 1958, but an additional 52 percent was indirectly required to meet the demands generated by PCE. The glass industry (number 35) was also heavily dependent on PCE via the indirect flows. Although PCE required only 6 percent of this industry's output directly, it required an additional 62 percent of its output indirectly. The transportation and warehousing industry (number 65) was substantially dependent on both the direct and indirect demands of PCE. Twenty-five percent of this industry's output represented direct sales to persons—for passenger transportation and for transportation of all

goods bought directly by persons. An additional 36 percent was required indirectly by PCE.

The interdependence of the industries in the economy can be seen by the fact that even though an industry's production for persons was of one major type, some demand was generated on account of each of the other types of consumer expenditures. For example, the deliveries of the coal mining industry (number 7) to persons fall in the non-durable category and comprised 10 percent of the total output of the coal industry. However, 7 percent of this industry's output was required indirectly by personal expenditures on durables and 20 percent was required indirectly by expenditures on services. Some of the products of the paper industry (number 24) are nondurable expenditures of persons; these direct purchases accounted for 8 percent of the output of the paper industry. However, PCE on durables accounted indirectly for 10 percent of the paper industry's output, and expenditures on services accounted for 14 percent.

Conversion of PCE Data to Input-Output Form

IN order to determine the output required from each industry for a specified level and composition of personal consumption expenditures, it is necessary to prepare the consumption expenditure data in 1958 prices and in the industry classifications of the 1958 input-output table. The information on the industrial composition of PCE appearing in this article provides an important tool for translating expenditure data as they appear in the national accounts into the industry groupings of the input-output table. It should be understood that the industrial composition applicable to the year 1958 may require modification when used to analyze expenditures for other years.

The estimates of PCE to be studied may be developed at various degrees of aggregation, depending on the problem under investigation, the resources available, and so on.

If only the total of PCE is given, the analyst may use table 3, column 1, which shows the industrial composition

of total expenditures for personal consumption. Where PCE is given in terms of durables, nondurables and

services, the breakdowns shown in columns 2, 3, and 4 of table 3 would be useful.

Table 3.—Personal Consumption Expenditures in Purchasers' Prices, Classified by Industry and by Relative Importance of Each Industry in Each PCE Category, 1958

(Millions of dollars)

Producing industry	Percent of total value of each PCE category				Total
	(1)	(2)	(3)	(4)	
	100% ^a	90-99.9%	80-89.9%	70.0% and under	
Total	98,496	82,793	84,567	64,239	296,095
1. Livestock & livestock products	0	0	0	3,777	3,777
2. Other agricultural products	844	0	0	4,048	4,892
3. Forestry & fishery products	0	0	0	673	673
7. Coal mining	0	0	0	576	576
9. Stone & clay mining & quarrying	0	0	0	33	33
10. Chemical & fertilizers mineral mining	0	0	0	1	1
13. Ordnance & accessories	0	0	0	339	339
14. Food & kindred products	0	14,238	61,434	683	68,355
15. Tobacco manufactures	0	5,974	0	0	5,974
16. Broad & narrow fabrics, yarn & thread mills	0	0	0	1,540	1,540
17. Miscellaneous textile goods & floor coverings	0	0	0	1,539	1,539
18. Apparel	0	6,715	11,594	38	18,347
19. Miscellaneous fabricated textile products	0	0	0	2,017	2,017
20. Lumber & wood products, except containers	0	0	0	238	238
22. Household furniture	0	4,184	0	30	4,214
23. Other furniture & fixtures	0	0	0	255	255
24. Paper & allied products, except containers	0	0	0	1,464	1,464
25. Paperboard containers & boxes	0	0	0	44	44
26. Printing & publishing	0	3,105	0	664	3,769
27. Chemicals & selected chemical products	0	0	0	308	308
28. Plastics & synthetic materials	0	0	0	14	14
29. Drugs, cleaning & toilet preparations	0	0	4,682	1,612	6,294
30. Paints & allied products	0	0	0	36	36
31. Petroleum refining & related industries	10,981	0	3,462	0	14,443
32. Rubber & miscellaneous plastics products	0	0	0	2,319	2,319
34. Footwear & other leather products	0	0	3,571	980	4,551
35. Glass & glass products	0	0	0	289	289
36. Stone & clay products	0	0	0	397	397
37. Primary iron & steel manufacturing	0	0	0	31	31
38. Primary nonferrous metals manufacturing	0	0	0	26	26
40. Heating, plumbing & structural metal products	0	0	0	88	88
41. Stampings, screw machine products & bolts	0	0	0	354	354
42. Other fabricated metal products	0	0	0	701	701
43. Engines & turbines	0	0	0	184	184
44. Farm machinery & equipment	0	0	0	11	11
47. Metalworking machinery & equipment	0	0	0	49	49
48. Special industry machinery & equipment	0	0	0	30	30
51. Office, computing & accounting machines	0	0	0	113	113
52. Service industry machines	0	0	0	450	450
53. Electric industrial equipment & apparatus	0	0	0	20	20
54. Household appliances	0	0	3,790	201	3,991
55. Electric lighting & wiring equipment	0	0	0	451	451
56. Radio, television & communication equipment	0	0	2,281	65	2,346
57. Electronic components & accessories	0	0	0	278	278
58. Miscellaneous electrical machinery, equipment & supplies	0	0	0	376	376
59. Motor vehicles & equipment	0	0	11,502	145	11,647
60. Aircraft & parts	0	0	0	38	38
61. Other transportation equipment	0	0	0	1,094	1,094
62. Scientific & controlling instruments	0	0	0	640	640
63. Optical, optoelectronic & photographic equipment	0	0	364	721	1,085
64. Miscellaneous manufacturing	0	0	0	4,609	4,609
65. Transportation & warehousing	3,061	0	0	769	3,830
66. Communications: excluding radio & TV broadcasting	3,392	0	0	17	3,409
67. Radio & TV broadcasting	0	0	0	0	0
68. Electric, gas, water & sanitary services	7,068	980	0	14	8,062
69. Wholesale & retail trade	0	0	0	377	377
70. Finance & insurance	7,571	4,306	0	117	11,994
71. Real estate & rental	28,670	11,945	0	242	40,857
72. Hotels, personal & repair services, excluding auto	8,268	949	0	2,249	11,466
73. Business services	1,631	0	0	357	1,988
75. Automobile repair & services	4,287	0	0	0	4,287
76. Amusement	1,744	1,081	0	467	3,292
77. Medical, educational services, & nonprofit organizations	15,498	0	0	504	16,002
78. Federal Government enterprises	0	0	0	682	682
79. State & local government enterprises	0	254	0	68	322
80. Gross imports of goods and services	1,077	0	1,585	2,196	5,858
81. Scrap, used & secondhand goods	0	0	0	1,658	1,658
82. Rest of the world industry	-1,153	0	0	0	-1,153
83. Household industry	3,508	0	0	0	3,508

NOTE.—Detail may not add to total due to rounding.

SOURCE: U.S. Department of Commerce, Office of Business Economics.

Table C in the November 1964 article presented the industrial composition of the 12 major functional categories of PCE, an aggregation of the 83

Table 6.—Alternative Estimates of 1964 Industrial Composition of Total Personal Consumption Expenditures

(Percent)

Producing industry	Alternative approaches			
	(1)	(2)	(3)	(4)
	Total PCE	Durables, non-durables, services	12 major categories of PCE	83 categories of PCE
Total.....	100.00	100.00	100.00	100.00
1. Livestock & livestock products.....	.73	.09	.56	.60
2. Other agricultural products.....	.85	.79	.75	.74
3. Forestry & fishery products.....	.30	.09	.09	.30
4. Coal mining.....	.09	.09	.09	.07
5. Stone & clay mining & quarrying.....	.01	(*)	.01	.01
20. Chemical & fertilizer mineral mining.....	(*)	(*)	(*)	(*)
13. Ordnance & accessories.....	.05	.08	.06	.06
14. Food & kindred products.....	14.73	14.86	14.21	14.31
15. Tobacco manufactures.....	1.47	1.35	1.22	1.33
16. Food & kindred fabrics, yarn & kindred mills.....	.26	.24	.26	.27
17. Miscellaneous textile goods & floor coverings.....	.26	.31	.26	.30
18. Apparel.....	1.85	2.03	1.79	2.01
19. Miscellaneous fabricated textile products.....	.38	.37	.39	.42
20. Lumber & wood products, except containers.....	.06	.06	.05	.06
22. Household furniture.....	.83	1.00	.65	.65
23. Other furniture & fixtures.....	.04	.05	.05	.05
24. Paper & allied products, except containers.....	.29	.28	.30	.30
25. Paperboard containers & boxes.....	.81	.81	.81	.81
26. Printing & publishing.....	.84	.85	.86	.86
27. Chemicals & selected chemical products.....	.07	.07	.09	.07
28. Plastics and synthetic materials.....	(*)	(*)	(*)	(*)
29. Drugs, cleaning and toilet preparations.....	1.28	1.21	1.24	1.40
30. Paints and allied products.....	.04	(*)	.01	.01
31. Petroleum refining and related industries.....	2.50	2.26	2.67	2.33
32. Rubber and miscellaneous plastics products.....	.45	.51	.43	.49
34. Footwear and other leather products.....	.90	.85	.89	.82
35. Glass and glass products.....	.05	.05	.05	.05
36. Stone and clay products.....	.07	.08	.08	.08
37. Primary iron and steel manufacturing.....	.04	(*)	.01	.01
38. Primary nonferrous metals manufacturing.....	(*)	(*)	(*)	(*)
40. Heating, plumbing and structural metal products.....	.02	.03	.03	.03
41. Stampings, screw machine products and bolts.....	.09	.10	.09	.09
42. Other fabricated metal products.....	.13	.14	.14	.15
43. Engines and turbines.....	.04	.05	.05	.06
44. Farm machinery and equipment.....	(*)	(*)	(*)	(*)
47. Metalworking machinery and equipment.....	.01	.01	.01	.01
48. Special industry machinery and equipment.....	.01	.01	.01	.01
51. Office, computing and accounting machines.....	.02	.02	.02	.02
52. Service industry machines.....	.09	.10	.09	.10
53. Electric industrial equipment and apparatus.....	.01	(*)	.01	.01
54. Household appliances.....	.83	.89	.86	.82
55. Electric lighting and wiring equipment.....	.11	.12	.11	.12
56. Radio, television and communication equipment.....	.47	.47	.51	.64
57. Electronic components and accessories.....	.05	.06	.06	.07
58. Miscellaneous electrical machinery, equipment and supplies.....	.09	.10	.10	.10
59. Motor vehicles and equipment.....	3.17	3.52	3.44	4.18
60. Aircraft and parts.....	.01	.01	.01	.01
61. Other transportation equipment.....	.28	.29	.27	.37
62. Scientific and controlling instruments.....	.12	.14	.12	.06
63. Optical, ophthalmic and photographic equipment.....	.10	.10	.17	.15
64. Miscellaneous manufacturing.....	.57	.56	.61	.99
65. Transportation & warehousing.....	2.99	2.96	3.03	2.71
66. Communications, excluding radio & TV broadcasting.....	1.35	1.36	1.38	1.53
67. Electric, gas, water & sanitary services.....	2.78	2.79	2.85	2.76
69. Wholesale & retail trade.....	21.21	21.25	20.88	21.29
70. Finance & insurance.....	4.07	4.06	4.20	4.15
71. Real estate & rental.....	12.79	12.83	14.02	14.24
72. Hotels, personal & repair services, excluding auto.....	8.28	8.27	8.14	8.30
73. Business services.....	.66	.66	.65	.63
74. Automobile repair & services.....	1.81	1.52	1.64	1.37
75. Amusements.....	1.13	1.13	1.21	.96
77. Medical, educational services, & nonprofit organizations.....	7.05	7.07	7.20	7.06
78. Federal government enterprises.....	.22	.22	.22	.22
79. State & local government enterprises.....	.11	.11	.13	.13
80. Gross imports of goods & services.....	1.38	1.30	1.43	1.33
83. Scrap, used & secondhand goods.....	(*)	(*)	(*)	(*)
84. Rest of the world industry.....	.40	.40	.46	.35
85. Household industry.....	1.21	1.21	1.24	.87

*Less than 0.005 percent.

NOTE.—Details may not add to total due to rounding.

SOURCE: U.S. Department of Commerce, Office of Business Economics.

categories shown in table 1 of this article. These breakdowns could be used with independent estimates of the aggregate value of each of the 12 major categories.⁵

If PCE is known for each of the 83 categories shown in the annual GNP accounts, the producers' values in table 1 could be used to classify, by industry, the value of each PCE category. This method—the 83-category method—makes use of the finest detail available from published series on PCE. Furthermore, the 83 categories provide substantial flexibility for the analyst since they can be recombined to any level of aggregation. Table 1 is also of use where the problem under analysis concerns only selected categories.

All of these alternatives assume, in varying degrees, stability in the industrial composition of PCE. Detailed as the 83-category method is, its use would not, of course, take account of changes in industrial composition within a PCE category from 1958 to the period under consideration. For example, the 1958 industrial composition of "kitchen and other household appliances" (category V-2), if applied to a year after 1958, would probably underestimate the purchases of air conditioners from industry 52 and overestimate the purchases of other household appliances from industry 54. Under such circumstances, regardless of what level of aggregation of PCE is used, the analyst may find it desirable—depending on the nature of his problem—to make explicit changes in the industrial composition of one or more categories,⁶ with appropriate changes in the transportation and trade margins for the category.

Let us assume that the analyst has classified PCE into the 83 categories and now wishes to estimate its industrial composition. The following procedure would be used:

(1) Convert the value for each of the categories to 1958 prices by dividing total expenditures in purchasers' prices by a price index on a 1958 base. Price

5. Table C in the November 1964 article used groupings that are being revised slightly. Of the 12 categories, changes were confined to shifts from category VI to category VII.

6. Table 2 shows the changes that took place in the industrial composition of each PCE category from 1947 to 1963 in purchasers' prices.

deflators are published in the national accounts for broad groups of PCE. Detailed price indexes are available from basic sources such as the BLS Consumer Price Index.

(2) For each consumption category, prepare a percent distribution of producers' values. Such a distribution for each category can be obtained from the first column of table 1 if the first column is extended (as shown in the next 3 columns) to include total transportation margins (industry 65), total trade margins (industry 69), and insurance charges (industry 70).

(3) Multiply the deflated value of expenditures obtained in step 1 by the percent distribution obtained in step 2.

(4) For each industry, sum the resulting values.

If more aggregated alternatives are used, step 2 is unnecessary since a complete breakdown of producers' values for all industries (including transportation and trade) is available in table 3 of this article or in table C of the November 1964 article.

Although the problem of industry mix within a PCE category is one which the analyst must be constantly aware of, its importance should not be exaggerated because many categories consist entirely or in large part of a single industry. Of the total value of sales to persons in 1958 (measured in purchasers' prices), 34 percent was classified in PCE categories where a single industry comprised 100 percent of the category; 18 percent was classified in categories where one industry comprised 90 to 99.9 percent of the category, and 33 percent fell in categories where one industry comprised 80 to 89.9 percent of the category. Only 15 percent of the value of industry sales to persons fell in categories where one industry comprised less than 80 percent of the value of the category. The detail for each industry is shown in table 5.

Each entry (in purchasers' prices) within each category in table 1 was allocated to one of the first four columns in table 5, according to the percent of the total value of the category represented by the entry. For example, the first entry for the apparel industry (number 18) in table 1 appears in category II-3a, where it comprises 87 percent of the category. Accordingly,

Table 7.—Industrial Composition of Personal Consumption Expenditures in Purchasers' Prices, 1947 and 1958

Producing industry	Percent distribution of personal consumption expenditures		
	1947	1947	1958
	(Current dollars)	(1946 dollars)	
Total	100.00	100.00	100.00
1. Livestock & livestock products	2.06	1.47	.96
2. Other agricultural products	3.81	3.32	1.59
3. Forestry & fishery products	.23	.28	.28
4. Agricultural, forestry & fishery services	0	0	0
5. Iron & ferrous alloy ores mining	0	0	0
6. Nonferrous metal ores mining	0	0	0
7. Coal mining	.69	.79	.20
8. Crude petroleum & natural gas	0	0	0
9. Stone & clay mining & quarrying	0	0	.01
10. Chemical & fertilizer mineral mining	0	(*)	(*)
11. New construction	0	0	0
12. Maintenance & repair construction	0	0	.11
13. Ordnance & accessories	.10	.13	.11
14. Food & kindred products	26.02	26.90	22.88
15. Tobacco manufactures	2.34	2.41	2.06
16. Broad & narrow fabrics, yarn & thread mills	1.03	.72	.53
17. Miscellaneous textile goods & floor coverings	.33	.30	.53
18. Apparel	8.34	7.10	8.82
19. Miscellaneous fabricated textile products	.87	.37	.88
20. Lumber & wood products, except containers	.39	.37	.08
21. Wooden containers	0	0	0
22. Household furniture	1.59	1.45	1.45
23. Other furniture & fixtures	.03	.04	.09
24. Paper & allied products, except containers	.39	.38	.50
25. Paperboard containers & boxes	(*)	(*)	.02
26. Printing & publishing	1.31	1.64	1.28
27. Chemicals & selected chemical products	.10	.10	.10
28. Plastics & synthetic materials	(*)	(*)	(*)
29. Drugs, cleaning & toilet preparations	1.73	1.38	2.34
30. Paints & allied products	.02	.02	.01
31. Petroleum refining & related industries	3.02	3.26	4.97
32. Rubber & miscellaneous plastics products	.69	.71	.80
33. Leather tanning & industrial leather products	(*)	(*)	0
34. Footwear & other leather products	2.10	2.14	1.87
35. Glass & glass products	.17	.24	.10
36. Stone & clay products	.15	.17	.14
37. Primary iron & steel manufacturing	.06	.08	.01
38. Primary nonferrous metals manufacturing	.03	.04	.01
39. Metal containers	.03	.02	0
40. Heating, plumbing & structural metal products	.16	.17	.03
41. Stampings, screw machine products & bolts	.29	.34	.13
42. Other fabricated metal products	.23	.30	.24
43. Engines & turbines	.03	.03	.06
44. Farm machinery & equipment	.04	.01	(*)
45. Construction, mining & oil field machinery	0	0	0
46. Materials handling machinery & equipment	0	0	0
47. Metalworking machinery & equipment	.03	.03	.02
48. Special industry machinery & equipment	.01	.03	.01
49. General industrial machinery & equipment	0	0	0
50. Machine shop products	0	0	0
51. Office, computing & accounting machines	.02	.03	.04
52. Service industry machines	.01	.01	.13
53. Electric industrial equipment & apparatus	.01	.01	.01
54. Household appliances	1.87	1.35	1.28
55. Electric lighting & wiring equipment	.19	.20	.18
56. Radio, television & communication equipment	.74	.43	.31
57. Electronic components & accessories	(*)	(*)	.10
58. Miscellaneous electrical machinery, equipment & supplies	.23	.25	.15
59. Motor vehicles & equipment	2.73	3.10	3.95
60. Aircraft & parts	.01	.02	.01
61. Other transportation equipment	.27	.26	.36
62. Scientific & controlling instruments	.44	.34	.22
63. Optical, ophthalmic & photographic equipment	.39	.37	.44
64. Miscellaneous manufacturing	2.01	1.78	1.55
65. Transportation & warehousing	2.06	2.83	1.32
66. Communications: excluding radio & TV broadcasting	.86	.89	1.35
67. Radio & TV broadcasting	0	0	0
68. Electric, gas, water & sanitary services	1.74	1.78	2.78
69. Wholesale & retail trade	.19	.18	.13
70. Finance & insurance	2.68	3.69	4.07
71. Real estate & rental	9.52	10.43	15.78
72. Hotels; personal & repair services, excluding auto	3.34	3.67	3.26
73. Business services	.56	.84	.65
74. Research & development	0	0	0
75. Automobile repair & services	1.22	1.41	1.31
76. Amusements	1.82	1.96	1.12
77. Medical, educational services, & nonprofit organizations	5.48	5.26	7.43
78. Federal Government enterprises	.38	.22	.22
79. State & local government enterprises	.05	.03	.11
80. Gross imports of goods & services	1.07	.89	2.02
81. Business travel, entertainment, & gifts	0	0	0
82. Office supplies	0	0	0
83. Scrap, used & secondhand goods	.36	.29	.58
84. Government industry	0	0	0
85. Rest of the world industry	-.46	-.46	-.40
86. Household industry	1.46	1.52	1.21

*Less than 0.05 percent.

Source: U.S. Department of Commerce, Office of Business Economics.

Table 8.—Industrial Composition of Personal Consumption Expenditures in Purchasers' Prices by PCE Category,¹ in Constant (1958) Dollars, 1947 and 1953

(Percent)

Producing industry number ²	1947	1953	Producing industry number ²	1947	1953	Producing industry number ²	1947	1953	Producing industry number ²	1947	1953	Producing industry number ²	1947	1953
I-1. Food purchased for off-premise consumption			II-1. Cleaning, drying, pressing, alterations, storage and repair of garments (in shops) not elsewhere classified			V-2. Kitchen and other household appliances			V-7. Stationery and writing supplies			VI-5. Other professional services		
1.....	106.0	100.6	75.....	106.6	104.0	22.....	100.0	100.0	77.....	100.0	100.0	68.....	10.8	11.7
2.....	3.8	3.5				23.....	0	0				69.....	19.7	6.3
3.....	10.0	8.5				24.....	0	0				82.....	0	1.2
4.....	0	0				25.....	0	0				VIII-1c. Automobile repairs, greasing, washing, parking, storage, and rental		
10.....	0	(*)				26.....	0	0				75.....	100.0	180.0
14.....	83.3	86.6				27.....	0	0				VIII-1d. Gasoline and oil		
27.....	(*)	(*)				28.....	0	0				31.....	100.0	100.0
33.....	0	0				29.....	0	0				VIII-1e. Bridge, tunnel, ferry, and road tolls		
65.....	0	0				30.....	0	0				65.....	100.0	100.0
80.....	1.9	3.6				31.....	0	0				70.....	100.0	100.0
I-2. Purchased meals and beverages			II-5. Laundering in establishments			V-3. China, glassware, tableware, and linens			V-8a. Electricity			VII-1. Brokerage charges and investment counseling³		
1.....	100.0	100.0	72.....	100.0	100.0	30.....	100.0	100.0	68.....	100.0	100.0	70.....	100.0	100.0
2.....	1.4	1.2				31.....	1.9	1.4				75.....	100.0	100.0
3.....	2.0	2.5				32.....	0	0				77.....	100.0	100.0
4.....	0	0				33.....	0	0				VII-2. Bank service charges, trust services, and safe-deposit box rental		
14.....	30.5	32.9				34.....	0	0				78.....	100.0	100.0
27.....	(*)	(*)				35.....	0	0				VII-3. Services furnished without payment by financial intermediaries except insurance companies		
33.....	0	0				36.....	0	0				70.....	100.0	100.0
69.....	0	2.5				37.....	0	0				75.....	100.0	100.0
I-3. Food furnished government (including military) and commercial enterprises			II-7. Jewelry and watches			V-4. Other durable house furnishings			V-8b. Gas			VII-4. Expense of handling life insurance		
1.....	100.0	100.0	34.....	100.0	100.0	30.....	100.0	100.0	65.....	100.0	100.0	70.....	100.0	100.0
2.....	3.4	3.5				31.....	1.9	1.4				75.....	100.0	100.0
3.....	10.0	8.5				32.....	0	0				77.....	100.0	100.0
4.....	0	0				33.....	0	0				VII-5. Legal services		
10.....	0	(*)				34.....	0	0				75.....	100.0	100.0
14.....	35.4	38.7				35.....	0	0				77.....	100.0	100.0
27.....	0	(*)				36.....	0	0				VII-6. Funeral and burial expenses⁴		
30.....	0	1.5				37.....	0	0				70.....	100.0	100.0
I-4. Food produced and consumed on farms			II-8. Other clothing, accessories, and jewelry			V-5. Semidurable house furnishings			V-8c. Other fuel and ice			VII-7. Other personal business		
1.....	100.0	100.0	72.....	100.0	100.0	15.....	100.0	100.0	75.....	100.0	100.0	68.....	100.0	100.0
2.....	1.4	1.3				16.....	8.4	6.1				73.....	10.2	12.6
3.....	2.0	2.5				17.....	20.2	18.1				78.....	1.0	0
4.....	0	0				18.....	0	0				79.....	77.0	78.3
10.....	0	(*)				19.....	2.6	4.0				78.....	6.8	6.7
14.....	35.4	38.7				20.....	7.2	3.7				VIII-1a. Railway (excluding communication) and sleeping and parlor car		
30.....	0	1.5				21.....	2.4	4.2				65.....	100.0	100.0
I-5. Tobacco products			III-1. Toilet articles and preparations			V-6. Cleaning and polishing preparations, and misc. household supplies and paper products			V-9. Telephone and telegraph			VIII-2a. Railway (communication)		
15.....	100.0	100.0	19.....	100.0	100.0	30.....	100.0	100.0	65.....	100.0	100.0	65.....	100.0	100.0
30.....	99.9	99.9				31.....	1.9	2.0				VIII-2b. Intercity bus		
80.....	0	0				32.....	0	0				65.....	100.0	100.0
II-1. Shoes and other footwear			III-2. Barbershops, beauty parlors, and baths			V-7. Semidurable house furnishings			V-10. Domestic service			VIII-2c. Airline		
22.....	100.0	100.0	72.....	100.0	100.0	15.....	100.0	100.0	30.....	100.0	100.0	65.....	100.0	100.0
24.....	0	0				16.....	8.4	6.1				VIII-3d. Other intercity transportation		
31.....	0	0				17.....	20.2	18.1				65.....	100.0	100.0
II-2. Shoe cleaning and repair			IV-1. Owner-occupied nonfarm dwellings—space-rental value			V-8. Semidurable house furnishings			V-11. Other household operation			IX-1. Books and maps		
72.....	100.0	100.0	71.....	100.0	100.0	15.....	100.0	100.0	30.....	100.0	100.0	26.....	100.0	100.0
						16.....	8.4	6.1				83.....	0	0
II-3. Men's, women's and children's, men's and boys' clothing and accessories, except footwear			IV-2. Tenant-occupied nonfarm dwellings (including lodging houses)—space rent			V-9. Semidurable house furnishings			V-12. Other household operation			IX-2. Magazines, newspapers, and sheet music		
15.....	100.0	100.0	71.....	100.0	100.0	15.....	100.0	100.0	30.....	100.0	100.0	26.....	100.0	100.0
17.....	0	0				16.....	8.4	6.1				83.....	0	0
18.....	0	0				17.....	20.2	18.1				IX-2. Magazines, newspapers, and sheet music		
19.....	0	0				18.....	0	0				26.....	100.0	100.0
20.....	0	0				19.....	2.6	4.0				83.....	0	0
21.....	0	0				20.....	7.2	3.7				IX-2. Magazines, newspapers, and sheet music		
22.....	0	0				21.....	2.4	4.2				26.....	100.0	100.0
23.....	0	0				22.....	0	0				83.....	0	0
24.....	0	0				23.....	0	0				IX-2. Magazines, newspapers, and sheet music		
25.....	0	0				24.....	0	0				26.....	100.0	100.0
26.....	0	0				25.....	0	0				83.....	0	0
27.....	0	0				26.....	0	0				IX-2. Magazines, newspapers, and sheet music		
28.....	0	0				27.....	0	0				26.....	100.0	100.0
29.....	0	0				28.....	0	0				83.....	0	0
30.....	0	0				29.....	0	0				IX-2. Magazines, newspapers, and sheet music		
31.....	0	0				30.....	0	0				26.....	100.0	100.0
32.....	0	0				31.....	1.9	2.0				83.....	0	0
33.....	0	0				32.....	0	0				IX-2. Magazines, newspapers, and sheet music		
34.....	0	0				33.....	0	0				26.....	100.0	100.0
35.....	0	0				34.....	0	0				83.....	0	0
36.....	0	0				35.....	0	0				IX-2. Magazines, newspapers, and sheet music		
37.....	0	0				36.....	0	0				26.....	100.0	100.0
38.....	0	0				37.....	0	0				83.....	0	0
39.....	0	0				38.....	0	0				IX-2. Magazines, newspapers, and sheet music		
40.....	0	0				39.....	0	0				26.....	100.0	100.0
41.....	0	0				40.....	0	0				83.....	0	0
42.....	0	0				41.....	0	0				IX-2. Magazines, newspapers, and sheet music		
43.....	0	0				42.....	0	0				26.....	100.0	100.0
44.....	0	0				43.....	0	0				83.....	0	0
45.....	0	0				44.....	0	0				IX-2. Magazines, newspapers, and sheet music		
46.....	0	0				45.....	0	0				26.....	100.0	100.0
47.....	0	0				46.....	0	0				83.....	0	0
48.....	0	0				47.....	0	0				IX-2. Magazines, newspapers, and sheet music		
49.....	0	0				48.....	0	0				26.....	100.0	100.0
50.....	0	0				49.....	0	0				83.....	0	0
51.....	0	0				50.....	0	0				IX-2. Magazines, newspapers, and sheet music		
52.....	0	0				51.....	0	0				26.....	100.0	100.0
53.....	0	0				52.....	0	0				83.....	0	0
54.....	0	0				53.....	0	0				IX-2. Magazines, newspapers, and sheet music		
55.....	0	0				54.....	0	0				26.....	100.0	100.0
56.....	0	0				55.....	0	0				83.....	0	0
57.....	0	0				56.....	0	0				IX-2. Magazines, newspapers, and sheet music		
58.....	0	0				57.....	0	0				26.....	100.0	100.0
59.....	0	0				58.....	0	0				83.....	0	0
60.....	0	0				59.....	0	0				IX-2. Magazines, newspapers, and sheet music		
61.....	0	0				60.....	0	0				26.....	100.0	100.0
62.....	0	0				61.....	0	0				83.....	0	0
63.....	0	0				62.....	0	0				IX-2. Magazines, newspapers, and sheet music		
64.....	0	0				63.....	0	0				26.....	100.0	100.0
65.....	0	0				64.....	0	0				83.....	0	0
66.....	0	0				65.....	0	0				IX-2. Magazines, newspapers, and sheet music		
67.....	0	0				66.....	0	0				26.....	100.0	100.0
68.....	0	0				67.....	0	0				83.....	0	0
69.....	0	0				68.....	0	0				IX-2. Magazines, newspapers, and sheet music		
70.....	0	0				69.....	0	0				26.....	100.0	100.0
71.....	0	0				70.....	0	0				83.....	0	

Table 3.—Industrial Composition of Personal Consumption Expenditures in Purchasers, Prices by PCE Category,¹ in Constant (1959) Dollars, 1947 and 1958—Continued

(Percent)

Producing industry number ²	1947	1958	Producing industry number ²	1947	1958	Producing industry number ²	1947	1958	Producing industry number ²	1947	1958	Producing industry number ²	1947	1958
IX-3. Nondurable toys and sport supplies			IX-4.—Continued			IX-6. Radio and TV repair			IX-8a. Admissions to spectator sports			IX-12. Other recreation		
2.....	100.0	100.0	34.....	1.8	1.8	72.....	100.0	100.0	28.....	100.0	100.0	1.....	100.0	100.0
15.....	14.4	9.6	43.....	3.0	1.4	73.....	0	1.4	72.....	0	1.4	77.....	100.0	100.0
17.....	0	0	44.....	6.0	10.0	74.....	0	1.4	73.....	0	1.4	78.....	100.0	100.0
24.....	1.4	2.4	60.....	2.7	2.1	75.....	0	1.4	74.....	0	1.4	79.....	100.0	100.0
29.....	2.1	2.3	61.....	23.1	25.6	76.....	0	1.4	75.....	0	1.4	80.....	100.0	100.0
32.....	2.3	2.3	62.....	18.6	21.2	77.....	0	1.4	76.....	0	1.4	81.....	100.0	100.0
33.....	4.4	2.1	63.....	25.0	25.1	78.....	0	1.4	77.....	0	1.4	82.....	100.0	100.0
35.....	0	1.3	64.....	1.2	4	79.....	0	1.4	78.....	0	1.4	83.....	100.0	100.0
36.....	8.7	1.6	65.....	0	0	80.....	0	1.4	79.....	0	1.4	84.....	100.0	100.0
37.....	12.4	15.2	66.....	0	0	81.....	0	1.4	80.....	0	1.4	85.....	100.0	100.0
38.....	32.4	28.8	67.....	0	0	82.....	0	1.4	81.....	0	1.4	86.....	100.0	100.0
39.....	0	3.1	68.....	0	0	83.....	0	1.4	82.....	0	1.4	87.....	100.0	100.0
IX-4. Wheel goods, durable toys, sport equipment, boats and pleasure aircraft			IX-5. Radio and TV receivers, records, and musical instruments			IX-7. Flowers, seeds, and potted plants			IX-8b. Clubs and fraternal organizations except insurance			X-1. Private higher education		
13.....	100.0	100.0	34.....	100.0	100.0	2.....	100.0	100.0	77.....	100.0	100.0	77.....	100.0	100.0
19.....	9.1	8.9	35.....	0	0	3.....	100.0	100.0	78.....	100.0	100.0	78.....	100.0	100.0
19.....	1.4	1.4	36.....	74.8	80.4	4.....	100.0	100.0	79.....	100.0	100.0	79.....	100.0	100.0
32.....	1.4	1.3	37.....	3	9.8	5.....	100.0	100.0	80.....	100.0	100.0	80.....	100.0	100.0
			38.....	6.4	9	6.....	100.0	100.0	81.....	100.0	100.0	81.....	100.0	100.0
			39.....	17.8	7.4	7.....	100.0	100.0	82.....	100.0	100.0	82.....	100.0	100.0
			40.....	0	1.2	8.....	100.0	100.0	83.....	100.0	100.0	83.....	100.0	100.0
			41.....	0	0	9.....	100.0	100.0	84.....	100.0	100.0	84.....	100.0	100.0
			42.....	0	0	10.....	100.0	100.0	85.....	100.0	100.0	85.....	100.0	100.0
			43.....	0	0	11.....	100.0	100.0	86.....	100.0	100.0	86.....	100.0	100.0
			44.....	0	0	12.....	100.0	100.0	87.....	100.0	100.0	87.....	100.0	100.0
			45.....	0	0	13.....	100.0	100.0	88.....	100.0	100.0	88.....	100.0	100.0
			46.....	0	0	14.....	100.0	100.0	89.....	100.0	100.0	89.....	100.0	100.0
			47.....	0	0	15.....	100.0	100.0	90.....	100.0	100.0	90.....	100.0	100.0
			48.....	0	0	16.....	100.0	100.0	91.....	100.0	100.0	91.....	100.0	100.0
			49.....	0	0	17.....	100.0	100.0	92.....	100.0	100.0	92.....	100.0	100.0
			50.....	0	0	18.....	100.0	100.0	93.....	100.0	100.0	93.....	100.0	100.0
			51.....	0	0	19.....	100.0	100.0	94.....	100.0	100.0	94.....	100.0	100.0
			52.....	0	0	20.....	100.0	100.0	95.....	100.0	100.0	95.....	100.0	100.0
			53.....	0	0	21.....	100.0	100.0	96.....	100.0	100.0	96.....	100.0	100.0
			54.....	0	0	22.....	100.0	100.0	97.....	100.0	100.0	97.....	100.0	100.0
			55.....	0	0	23.....	100.0	100.0	98.....	100.0	100.0	98.....	100.0	100.0
			56.....	0	0	24.....	100.0	100.0	99.....	100.0	100.0	99.....	100.0	100.0
			57.....	0	0	25.....	100.0	100.0	100.....	100.0	100.0	100.....	100.0	100.0
			58.....	0	0	26.....	100.0	100.0						
			59.....	0	0	27.....	100.0	100.0						
			60.....	0	0	28.....	100.0	100.0						
			61.....	0	0	29.....	100.0	100.0						
			62.....	0	0	30.....	100.0	100.0						
			63.....	0	0	31.....	100.0	100.0						
			64.....	0	0	32.....	100.0	100.0						
			65.....	0	0	33.....	100.0	100.0						
			66.....	0	0	34.....	100.0	100.0						
			67.....	0	0	35.....	100.0	100.0						
			68.....	0	0	36.....	100.0	100.0						
			69.....	0	0	37.....	100.0	100.0						
			70.....	0	0	38.....	100.0	100.0						
			71.....	0	0	39.....	100.0	100.0						
			72.....	0	0	40.....	100.0	100.0						
			73.....	0	0	41.....	100.0	100.0						
			74.....	0	0	42.....	100.0	100.0						
			75.....	0	0	43.....	100.0	100.0						
			76.....	0	0	44.....	100.0	100.0						
			77.....	0	0	45.....	100.0	100.0						
			78.....	0	0	46.....	100.0	100.0						
			79.....	0	0	47.....	100.0	100.0						
			80.....	0	0	48.....	100.0	100.0						
			81.....	0	0	49.....	100.0	100.0						
			82.....	0	0	50.....	100.0	100.0						
			83.....	0	0	51.....	100.0	100.0						
			84.....	0	0	52.....	100.0	100.0						
			85.....	0	0	53.....	100.0	100.0						
			86.....	0	0	54.....	100.0	100.0						
			87.....	0	0	55.....	100.0	100.0						
			88.....	0	0	56.....	100.0	100.0						
			89.....	0	0	57.....	100.0	100.0						
			90.....	0	0	58.....	100.0	100.0						
			91.....	0	0	59.....	100.0	100.0						
			92.....	0	0	60.....	100.0	100.0						
			93.....	0	0	61.....	100.0	100.0						
			94.....	0	0	62.....	100.0	100.0						
			95.....	0	0	63.....	100.0	100.0						
			96.....	0	0	64.....	100.0	100.0						
			97.....	0	0	65.....	100.0	100.0						
			98.....	0	0	66.....	100.0	100.0						
			99.....	0	0	67.....	100.0	100.0						
			100.....	0	0	68.....	100.0	100.0						

¹ Less than 0.05 percent.² The numbering scheme of the personal consumption expenditure categories corresponds to the table "Personal Consumption Expenditures, by Type of Product" to be published in a forthcoming supplement to the Survey of Consumer Expenditures. With the exceptions indicated, the category numbers also correspond to table 14 in the July 1964 Survey. Expenditure categories VII-6 and XII-3 in the July 1964 table have been omitted because they are no longer included in personal consumption expenditures.³ Industry number relates to the numbering scheme used for the 1958 input-output study. For names and Standard Industrial Classification (SIC) coverage of each industry, see the table at the end of this article.⁴ The entries for this industry are not exactly comparable. See footnote 7 and appendix for explanation.⁵ Change in definition from old category V-8c, Water.⁶ Change in definition from old category VII-1, Brokerage charges and interest, and investment counseling.⁷ Funeral and burial expenses, formerly numbered VI-8.⁸ Imported cars do not appear as a purchase from the import industry (number 80) but are included in the motor vehicles industry (number 59). The import date on autos and parts used for the 1958 input-output study did not distinguish between assembled and unassembled cars. The total value of such imports was transferred to industry 59 for distribution.⁹ Expenditures in the United States by foreigners, formerly numbered XII-4.¹⁰ Does not correspond to old category XII-4.

Source: U.S. Department of Commerce, Office of Business Economics.

this value of \$11,596 million was allocated to column 3 of table 5. The second entry for this industry (\$6,715 million) appears under category II-3b in table 1 and comprises 94 percent of the category; it was, therefore, allocated to column 2 of table 5. The next entry for industry 18 (\$19 million) appears under category II-4 and constitutes 88 percent of the category; therefore, it has been allocated to column 4 of table 5. The last entry (\$19 million) appears under category V-5 and comprises 75 percent of the total, so it too was allocated to column 4 of table 5.

Comparison of approaches

For illustrative purposes, the industrial composition of total personal consumption expenditures in 1964 has been estimated by the four different approaches described above. Each approach involved the use of revised 1964 figures (in 1958 prices) for PCE, at varying levels of aggregation, as follows: first, total PCE; second, durable

goods, nondurable goods and services; third, the 12 major categories of PCE; and finally, the 83 categories of PCE. In each approach, the 1958 industrial composition of the various categories was held constant. Table 6 presents (in percentage terms) these alternative estimates of the industrial composition of 1964 PCE.

It seems reasonable to assume that the 83-category method yields the best approximation to the "correct" industrial composition in 1964, and for this reason, it was used as a standard of comparison. This standard in itself may be subject to some error. For each approach, the percent difference from the 83-category standard was computed, industry by industry. These percent differences without regard to sign were then averaged for all industries, first on an unweighted basis and then on a weighted basis, using the 83-category estimates for the various industries as weights. Summary results are shown in the text table below.

	Percent		
	Total PCE	Durable, non-durable, and services	12 major categories of PCE
Unweighted average ¹	11.8	8.4	8.6
Weighted average ¹	6.3	4.5	4.8

¹ Industries of less than 0.01 percent in column 4 of table 6 were excluded from the averages.

As might have been expected, the use of the 1958 industrial composition of total personal consumption to estimate the 1964 composition yields results inferior to the two less aggregated approaches (the 3-category breakdown and the 12-category breakdown). It is also apparent that, in this particular example, the estimates from the 12-way breakdown are not significantly different from those from the 3-way breakdown.

In comparing the performance of the latter two approaches with each other, it is important to remember that 1958 was a year of mild recession; in constant dollars, expenditures on

durable goods were relatively low and expenditures on nondurables were relatively high, as compared with 1964. Services were about the same proportion of the total in both years. The 12-category breakdown does not isolate the three types of expenditure but combines two or more of them in some categories. The 3-category breakdown is homogeneous in this respect; although it is more highly aggregated than the 12-

category breakdown, it has the advantage of a separation of expenditures into groups with different responses to the business cycle.

It is also evident from this example that the percent differences are largest for the industries of small value in PCE; the unweighted average percent difference is greater than the weighted average in each of the three approaches shown in the text table.

Industry Numbering for the 1958 Input-Output Study

Industry No. and Industry Title	Related SIC Codes (1957 Edition)	Industry No. and Industry Title	Related SIC Codes (1957 Edition)
Agriculture, forestry & fisheries		46 Materials handling machinery & equipment	3534, 3535, 3536, 3537
1 Livestock & livestock products.....	015, pt. 014, 0383, pt. 02, pt. 0729	47 Metalworking machinery & equipment	354
2 Other agricultural products.....	011, 012, pt. 014, 0182, 0189, pt. 02	48 Special industry machinery & equipment	355
3 Forestry & fishery products.....	074, 081, 082, 084, 086, 091	49 General industrial machinery & equipment	356
4 Agricultural, forestry & fisheries services.	071, 0723, pt. 0729, 085, 088	50 Machine shop products	359
Mining		51 Office, computing & accounting machines	357
5 Iron & ferroalloy ores mining.....	1011, 109	52 Service industry machines	358
6 Nonferrous metal ores mining.....	102, 103, 104, 305, 106, 307	53 Electric transmission & distribution equipment, & electrical industrial apparatus	361, 362
7 Coal mining.....	11, 12	54 Household appliances	363
8 Crude petroleum & natural gas.....	1311, 1321	55 Electric lighting & wiring equipment	364
9 Stone & clay mining & quarrying.....	141, 142, 144, 145, 148, 149	56 Radio, television, & communication equipment	365, 366
10 Chemical & fertilizer mineral mining.	147	57 Electronic components & accessories	367
Construction		58 Miscellaneous electrical machinery, equipment, & supplies	368
11 New construction.....	138, pt. 15, pt. 16, pt. 17, pt. 6301	59 Motor vehicles & equipment	371
12 Maintenance & repair construction.....	pt. 15, pt. 16, pt. 17	60 Aircraft & parts	372
Manufacturing		61 Other transportation equipment	373, 374, 375, 379
13 Ordnance & accessories.....	19	62 Professional, scientific, & controlling instruments & supplies	381, 382, 383, 387
14 Food & kindred products.....	20	63 Optical, photographic, & photographic equipment & supplies	385, 386, 388
15 Tobacco manufactures.....	21	64 Miscellaneous manufacturing	38 (exc. 3892)
16 Broad & narrow fabrics, yarn & thread mills.....	221, 222, 223, 234, 235, 236	Transportation, communications, electric, gas, & sanitary services	
17 Miscellaneous textile goods & floor coverings	227, 229	65 Transportation & warehousing.....	40, 41, 42, 44, 45, 46, 47
18 Apparel.....	235, 236 (exc. 238), 239	66 Communications, except radio & television broadcasting.....	481, 482, 483
19 Miscellaneous fabricated textile products	239	67 Radio & T.V. broadcasting.....	490
20 Lumber & wood products, except containers	24 (exc. 244)	68 Electric, gas, water, & sanitary services	49
21 Wooded containers.....	244	Wholesale & retail trade	
22 Household furniture.....	251	69 Wholesale & retail trade.....	50 (exc. manufacturing sales offices), 52, 53, 54, 55, 56, 57, 58, 59, pt. 7300
23 Other furniture & fixtures.....	25 (exc. 251)	Finance, insurance & real estate	
24 Paper & allied products, except containers & boxes	26 (exc. 265)	70 Finance & insurance.....	60, 61, 62, 63, 64, 65, 67
25 Paperboard containers & boxes.....	265	71 Real estate & rental.....	66 (exc. 6641 & pt. 6641)
26 Printing & publishing.....	27	Services	
27 Chemicals & selected chemical products	281 (exc. alumina pt. of 2819), 285, 287, 289	72 Hotels & lodging places; personal & repair services, except automobile repair.....	70, 72, 73 (exc. 7304 & 7309)
28 Plastic & synthetic materials.....	285	73 Business services.....	8041, 73 (exc. 7301, 7302, & pt. 7300), 7304, 7305, 81, 86 (exc. 8021)
29 Drugs, cleaning, & toilet preparations	285, 284	74 Research & development.....	75
30 Paints & allied products.....	285	75 Automobile repair & services.....	75
31 Petroleum refining & related industries	29	76 Amusements.....	79, 79
32 Rubber & miscellaneous plastic products	30	77 Medical, educational services, & nonprofit organizations	8022, 7901, 80, 83, 84, 84, 8921
33 Leather tanning & industrial leather products	311, 312	Government enterprises	
34 Footwear & other leather products.....	31 (exc. 311, 312)	78 Federal Government enterprises.....	
35 Glass & glass products.....	321, 322, 323	79 State & local government enterprises.....	
36 Stone & clay products.....	324, 325, 326, 327, 328, 329	Imports	
37 Primary iron & steel manufacturing.....	331, 332, 333, 334, 335	80 Gross imports of goods & services.....	
38 Primary nonferrous metals manufacturing	3319 (alumina only), 333, 334, 335, 336, 3392	Domestic industries	
39 Metal containers.....	3411, 3491	81 Business travel, entertainment, & gifts.....	
40 Heating, plumbing & fabricated structural metal products	343, 344	82 Office supplies.....	
41 Screw machine products, bolts, nuts, etc., & metal stampings	345, 346	83 Scrap, used & secondhand goods.....	
42 Other fabricated metal products.....	342, 347, 348, 349 (exc. 3491)	Special industries	
43 Engines & turbines.....	351	84 Government industry.....	
44 Farm machinery & equipment.....	352	85 Rest of the world industry.....	
45 Construction, mining, oil field machinery & equipment	3531, 3532, 3533	86 Household industry.....	

Comparison of 1947 and 1958

IN order to illustrate the extent to which the industrial composition of personal consumption expenditures has changed over time, two tables are presented comparing 1947 and 1958. Such information may provide useful insights in estimating the industrial composition of PCE for years other than 1958. It is important to note that both of the tables are based on purchasers' prices.

The first, table 7, shows the industrial composition of total PCE in 1947 and 1958, in the prices of their respective years and in 1958 prices. Differences in industry composition in the two years, based on constant dollar data, reflect shifts in the relative importance of the 83 categories of PCE, industry shifts within each of the PCE categories, and estimating errors. The second table, number 8, shows for 1947 and 1958 the industrial composition of each PCE category based on constant (1958) dollars. It therefore isolates the changes in industrial composition within each category of PCE from changes in the relative importance of the various PCE categories in the total. Estimating errors also affect the comparison in table 8.

The 1947 figures in both tables 7 and 8 were based on the 1947 Inter-industry Study of the Bureau of Labor Statistics. The adjustments required to make the 1947 data correspond to the concepts of the 1958 flow table are described in the appendix below.

Appendix

UNPUBLISHED data from the 1947 Inter-industry Relations Study of the Bureau of Labor Statistics and the official personal consumption expenditures series of the National Income Division¹⁰ provided the bases for the 1947 distributions by industry shown in this article. Unlike the 1958 input-output study, the 1947 study had not been integrated with the national income and product accounts, so that adjustments were necessary to make the 1947 figures conform, as nearly as possible, to the concepts of the national accounts and the 1958 table. A tabulation giving the allocations to the personal sector from each industry by PCE category was available as a byproduct of the 1947 input-output study. Even when all adjustments were made to reorganize the 1947 input-output allocations into the concepts of the 1958 table, minor differences remained between the 1947 input-output allocations to a given PCE category and the National Income Division's estimate for that category. These were

10. To be published in a forthcoming supplement to the SURVEY.

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PCE in the 1958 Input-Output Study

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eliminated by providing the National Income Division's figures for 1947 for each PCE category among the industries contributing to the given PCE category in accordance with the reworked 1947 input-output allocations. In this way, the values for each PCE category and for total personal consumption were made to accord with the official series; however, statistical difficulties in recasting the 1947 data into the 1958 framework may still affect the comparison of 1947 and 1958 industrial composition shown in tables 7 and 8.

A major difference between the two studies was the industry classification scheme. In the 1947 study, the economy was divided into 193 industries, called the Emergency Model (EM) coding scheme. These EM industries were defined in terms of 440 industries for which the basic flows were analyzed, and these in turn were defined in terms of the classifications used in the 1947 Census of Manufactures. Through the use of the cross-classification between the 1947 and 1958 Standard Industrial Classifications, it was possible to assign most EM industries to the appropriate 1958 input-output (I-O) industry. In some cases, an EM industry covered two or more I-O industries. The specific products of these EM industries were identified and assigned to the proper I-O industry.

"Competitive imports" were treated differently in the two studies. In the 1947 study, imports that were similar to domestic products—competitive imports—were transferred to their domestic counterpart industry and were treated as if sold by the domestic industry. In 1958, only competitive imports destined for intermediate consumption were transferred in this way. Imports sold in final markets in substantially the same form as they were imported were shown as purchased directly from industry 80 (gross imports). With the detail available from the 1947 analysis, 1947 competitive imports that were of the same type as those directly allocated in 1958 were identified, taken out of their domestic counterpart industry, and assigned to I-O industry 80. This was done separately for each PCE category.

Several food items required adjustment for comparability. In the 1947 study, poultry and meat slaughtered on farms, whether for sale or for home consumption, were allocated directly to the personal sector; in the 1958 study, these items were treated as secondary products of farming and transferred to industry 14 (food and kindred products). For 1947, it was necessary to reallocate such purchases by persons to industry 14. In the 1947 study, milk was treated as an allocation directly from the farm sector to the consumer, with the processing of milk shown as a purchase from retail trade. In the 1958 study, milk processing was an activity of food and kindred products (industry 14). The 1947 purchasers' value of milk was taken out of the farm sector and allocated to industry 14 in the PCE categories that included it.

In the 1947 study, eating and drinking places were a separate processing sector that purchased food and other goods, paid wages, and sold meals to consumers. In 1958, eating and drinking place activity was treated as a trade margin. To put the 1947 figures on a basis comparable with the 1958, the 1947 inputs of food to eating and drinking places were identified; these were then shown as allocations directly to persons. All other inputs to eating and drinking places were treated as margins; a pro rata share of the margin was attributed to each food item to arrive at purchasers' value of food bought through eating and drinking places.

In the 1947 study, food furnished to government and commercial employees and clothing issued to the military were included in the purchases of the appropriate purchasing industry or of the government, depending on who did the purchasing. To make these items conform to 1958 concepts, they were included in PCE. The imputed food was classified in two ways. The government share was distributed in accordance with Federal Government purchases of food as shown in the records of the 1947 study, though this distribution reflects mainly purchases for the military. No attempt was made to adjust for the possibly different distribution of food furnished State employees. The commercial share was broken down by the 1947 distribution of "food for off-premise consumption." For 1947, clothing issued to the military was distributed in accordance with the 1958 breakdown.

The treatment of scrap, used, and secondhand goods differed in the two studies. In the 1947 study, there were no

net purchases by any final demand sector from the "used-goods" industry; all transactions involving such goods were presumed to be within the personal sector. Only the margin on such sales was measured and shown as a purchase by persons from the trade industry. As indicated above (see footnote 7), the treatment of used goods in the 1958 study was different. This noncomparability, which was of minor statistical importance, was allowed to stand except in the case of used cars. The 1947 figure for used cars was adjusted to conform to the concept of the 1958 study.

Travel and entertainment expenditures were not divided between business and consumers in the 1947 study. All such purchases were considered to be made by the personal sector. The 1958 study separated the business and consumer shares of travel and entertainment, with PCE reflecting only the personal share of such expenditures. Using detail underlying the 1947 PCE estimates, the 1947 data were adjusted to make the travel and entertainment expenditure data conform to the concepts of the 1958 table.

Nonlife insurance was conceptually different in the two studies, being measured as gross premiums earned in the 1947 study and as premiums earned less benefits paid in the 1958 study. The 1947 data were adjusted to conform to the 1958 concepts.

The adjusted 1947 data were converted to 1958 prices in the detail shown in table 8 of this article, that is, for each industry within a PCE category. The deflators used by the National Income Division were used in this price adjustment, disaggregated where necessary in order that the detailed price indexes could be assigned to I-O industry classifications. Because products of the smaller industries often were not represented in the overall deflator for a PCE category, additional price indexes from the Consumer Price Index and the Wholesale Price Index of the Bureau of Labor Statistics were used. Because of the use of these additional series, the deflated values for some PCE categories may not agree exactly with the official deflated values of the National Income Division.

Developments in the Auto Market

(Continued from page 6)

1963, there have been reductions in output of cars in the lower price lines, those with before-tax prices of \$2,000 or less (with standard equipment) and those in the \$2,000 to \$2,200 range. Production of both price lines combined fell from 28 percent of total auto output in the 1963 model year to 23 percent in 1964 and 20 percent in 1965.

In the first half of 1965, almost three-fourths of the new cars sold had V-8 engines, as compared with about one-half in 1961; 23 percent of new cars sold had factory-installed air-conditioning (8 percent were so equipped in 1961). About 60 percent had power steering (less than 40 percent in 1961), and 80 percent had automatic transmission, a feature that had already become popular by 1961, when 73 percent of new cars were so equipped.

Shifts in the auto market

As can be seen in chart 4, the outstanding change in the auto market in recent years has been the growing proportion of "intermediates" and

"sport-type" compacts at the expense of other compacts and standard-size cars. The market penetration of imports improved slightly in 1965, continuing the fractional gains enjoyed since the recent low in 1962.

Although standard-size cars still account for a major share of the market, they have slipped from 68 percent in the 1960 model year—the year the compacts were introduced—to 53 percent in the model year just ended. Compacts as a group, after rising from 24 percent in 1960 to 34 percent in 1962, fell back to 22 percent in the 1965 model year. This decline might well have been larger had there not been a growing demand for sport-type compacts. These cars, which accounted for 9 percent of the 1965 market as compared with 2 percent in 1961, have sports-car exteriors and bucket seats and are generally available with four-speed transmissions and high-performance engines. Each of the four American auto manufacturers now produces a sports compact, and at least one manufacturer has scheduled the introduction of still another sports compact next spring. In the 1965 model year, one of these cars—the Mustang—ranked third in sales, coming behind two standard-size cars.

The intermediates—cars that are between compacts and standards in wheel base and overall length—have increased their share of the market from 5 percent in 1962, their first year of production, to 19 percent in 1965. In this period, the number of intermediate brands offered to the public has proliferated, with the introduction of new brands and the lengthening of formerly compact-size models. For the 1966 model year, the Ford Motor Co. has lengthened one of its compacts to intermediate size.

Imported cars accounted for almost 6 percent of the total U.S. car market in 1965. Over two-thirds of total car imports were Volkswagens, which outsold several established domestic makes. All other foreign cars combined now account for a smaller share of the market than they did in 1957, before the 1958-60 boom in imported car sales.